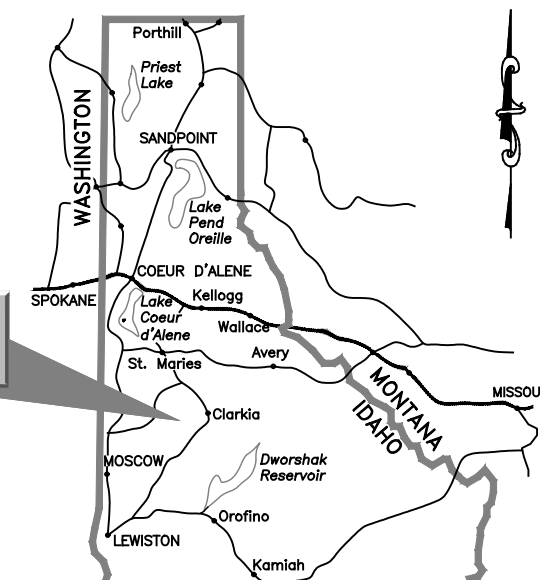


U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE, REGION 1

CONSTRUCTION PLANS FOR: GRAVES MEADOW BRIDGE REPLACEMENT NFSR 447 MP 8.33

PALOUSE RANGER DISTRICT
NEZ PERCE-CLEARWATER NATIONAL FOREST
LATAH COUNTY, IDAHO

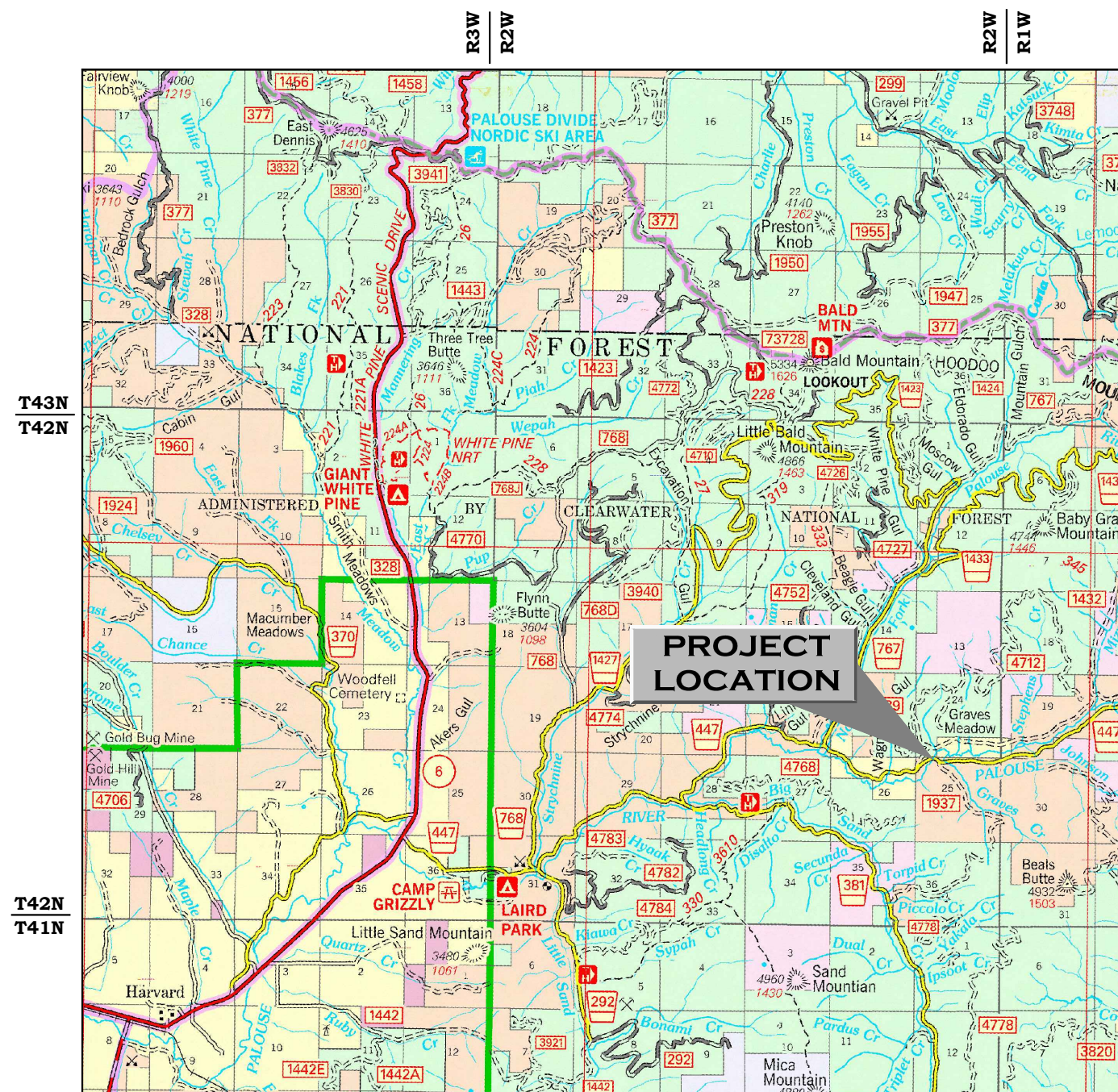


NORTHERN IDAHO LOCATION MAP

INDEX TO SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES & GENERAL NOTES
3	ROAD TYPICAL SECTION & POINT TABLES
4	ROAD PLAN & PROFILE
5	BRIDGE GENERAL LAYOUT
6	STRUCTURE EXCAVATION & BACKFILL
7	FOUNDATION PLAN
8-10	ABUTMENT DETAILS
11-14	SUPERSTRUCTURE DETAILS
15	STREAM DEWATERING REQUIREMENTS
XS1	ROAD CROSS SECTIONS

MATERIAL SOURCES
GOVERNMENT FURNISHED
Waste Site
CONTRACTOR FURNISHED
All Materials are Contractor Furnished

DRAFT PLANS
Not for Construction



VICINITY MAP

RECOMMENDED:

DATE _____

DISTRICT RANGER
PALOUSE RANGER DISTRICT

RECOMMENDED:

DATE _____

FOREST ENGINEER
NEZ PERCE-CLEARWATER NATIONAL FOREST

APPROVED:

DATE _____

FOREST SUPERVISOR
NEZ PERCE-CLEARWATER NATIONAL FOREST

APPROVED:

DATE _____

REGIONAL ENGINEER
NORTHERN REGION

DJ & A, P.C.
CONSULTING ENGINEER

CONSULTING ENGINEERS & LAND SURVEYORS
3203 RUSSELL STREET, MISSOULA, MONTANA 59801-8
PHONE 406/721-4320 FAX 406/548-6

DWG. NO. R 2238

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY		COMMENTS
15101	MOBILIZATION	Lump Sum	ALL		
15201	CONSTRUCTION SURVEY AND STAKING	Lump Sum	ALL		LICENSED SURVEYOR REQUIRED
15713	SOIL EROSION & POLLUTION CONTROL	Lump Sum	ALL		INCLUDES DEWATERING. SEE GENERAL NOTES.
20302	REMOVAL OF EXISTING TIMBER BRIDGE, DISPOSAL METHOD A	Each	1		
20411	UNCLASSIFIED BORROW EXCAVATION	Cubic Yard	90	CQ	CONTRACTOR FURNISHED MATERIAL FROM A COMMERCIAL SOURCE. IN PLACE QUANTITY, NOT ADJUSTED FOR SHRINK / SWELL.
20803	STRUCTURAL BACKFILL	Cubic Yard	80	CQ	CONTRACTOR FURNISHED FROM COMMERCIAL SOURCE.
20804	STRUCTURE EXCAVATION	Lump Sum	ALL		SEE SHEET 6. SUBMIT EXCAVATION PLAN FOR APPROVAL BEFORE BEGINNING WORK.
25101	PLACED RIPRAP, CLASS 3	Cubic Yard	110	CQ	CONTRACTOR FURNISHED MATERIAL FROM A COMMERCIAL SOURCE.
27201	GEOCELL ABUTMENT STABILIZATION, 6" DEPTH	Square Yard	33		
30207	CRUSHED AGGREGATE SURFACING, COMPACTION METHOD 1	Cubic Yard	35	CQ	CONTRACTOR FURNISHED MATERIAL FROM A COMMERCIAL SOURCE.
55218A	PRECAST CONCRETE MEMBER, GRADE BEAM	Each	2		
55218B	PRECAST CONCRETE MEMBER, WINGWALL	Each	4		
55301	PRECAST, PRESTRESSED STRUCTURAL CONCRETE MEMBER, TRI-DECK BEAM	Each	3		
55701	STRUCTURAL TIMBER AND LUMBER, TREATED GLUED LAMINATED CURBS	MFBM	0.82		
62504	SEEDING, DRY METHOD	Acre	0.1		INCLUDES MULCH
63306	POSTS, WOOD	Linear Foot	40		
63307	OBJECT MARKER, TYPE 3	Each	4		

CQ= Contract Quantity (See SECTION 109.02(b) of the STANDARD SPECIFICATIONS)

GENERAL NOTES

SPECIFICATIONS: Construct the project in compliance with Federal Highway Administration Standard Specifications for Construction of Road and Bridges on Federal Highway Projects (FP-14) and applicable Forest Service Supplemental Specifications (FSSS).

DEWATERING & EROSION CONTROL PLAN: Submit a Dewatering and Soil Erosion and Sediment Control Plan to the Contracting Officer for approval at least seven (7) days prior to beginning work. See Section 157 of the Supplemental Specifications for details. Construct temporary means to divert the flow of the live stream as necessary to perform work, including dewatering for bank construction and replanting. Do not pump water from excavations directly into the live stream. See Stream Dewatering Requirements on Sheet 6.

DISPOSAL: All materials designated for removal become the property of the Contractor and are to be disposed of by removing from the forest in an environmentally safe manner in accordance with all Local, State and Federal requirements.

TEMPORARY TRAFFIC CONTROL: Submit a Temporary Traffic Control Plan to the Contracting Officer for approval at least 30 days prior to intended use.

DESIGN NOTES

BRIDGE DESIGN: This structure is designed for HL-93 loading in accordance with AASHTO LRFD Bridge Design Specifications, 8th edition.

MATERIALS NOTES

CONCRETE: Use Class A(AE) for all cast-in-place and precast, non-prestressed concrete with $F'c = 5000$ psi at 28 days and an entrained air content of $5\% \pm 1\%$. Finish all precast elements with a Class 2- Rubbed Finish.

Use Class "P" Prestressed concrete with strength requirements as determined by the prestressed beam fabricator, except as follows. The minimum 28-day compressive strength is 5500 psi ($F_c = 5500$ psi) and the minimum compressive strength at transfer of prestress force is 3500 psi ($F_{ci} = 3500$ psi). In the top two inches of the prestressed beams, use concrete with an entrained air content of 5% \pm 1%.

Make all concrete in accordance with an approved mix design. Chamfer all exposed edges of concrete 3/4" and fillet all acute angles 3" unless otherwise noted.

MATERIALS NOTES (CONTINUED)

REINFORCING STEEL: Use non-prestressed reinforcing of the deformed type conforming to AASHTO M31 (ASTM A615), Grade 60. Concrete cover shall be as shown; where not shown it shall conform to AASHTO. Cut and bend steel in accordance with ACI 315.

PRESTRESSING STEEL: Use prestressing steel of low-relaxation prestressing strand conforming to AASHTO M203, Grade 270.

HARDWARE AND STRUCTURAL STEEL: Use steel shapes, plates and bars meeting the requirements of ASTM A36. Galvanize all steel in accordance with AASHTO M111 (ASTM A123) except when covered by 1 inch or more of concrete. Use hardware meeting the requirements of ASTM A307 except as noted. Galvanize hardware in accordance with AASHTO M232 (ASTM A153) unless covered by 1 inch or more of concrete.

WELDING: Weld in accordance with the Bridge Welding Code, AWS D1.5 with E70XX electrodes. A certified welder is required.

INSTALLATION OF PRESTRESSED BEAMS: Erect prestressed concrete beams with vertical variations of no more than 3/8" at Centerline Bearing and no more than 3/8" between deck surfaces at any point along the slab length. Use galvanized steel shims where necessary. Furnish shims the same size as the elastomeric bearing pads and place the shims between the beams and the bearing pads. Galvanize the shims in accordance with AASHTO M232.

After erecting the beams and prior to grouting, measure the vertical difference between adjacent deck surfaces every 10' along the bridge length and submit the measurements to the CO. DO NOT proceed with grouting the beam keyways or attempt to level the beams until the CO has reviewed and evaluated the measurements for tolerances and camber or erection inconsistencies. If the CO determines that a camber adjustment/leveling procedure is required, submit a camber adjustment/leveling plan designed and approved by the slab manufacturer. Any camber adjustment/leveling work authorized by the CO must be done under the direction of a manufacturer's representative. Notify the CO immediately of any damage to the beams during erection. Make no repairs until authorized by the CO.

GLUED LAMINATED MEMBERS: Furnish Glued Laminated members conforming to the current National Design Specifications for Wood Construction (NDS), Combination Symbol 3, 4 or 5 as specified in Table 5B. Fabricate members for industrial appearance using resorcinol glues. Submit shop drawings for all glued laminated members showing all dimensions and fabrication details, including an Erection Plan with proposed installation details.

TIMBER TREATMENT: After fabrication, incise and pressure treat all timber members in conformance with AWP A U1, Use Category as described below using pentachlorophenol, Type A Solvent (PCP-A) or copper naphthenate.

Curbs: Use Category UC3B (above ground, exposed)

Follow WWPI's "Best Management Practices for the Use of Treated Wood in Aquatic Environments."

FIELD TREATMENT: Treat any field drilled holes and field cut or damaged members with a 2% solution of copper naphthenate. Pour the field treatment into any field-drilled holes or nail holes prior to inserting the fasteners.

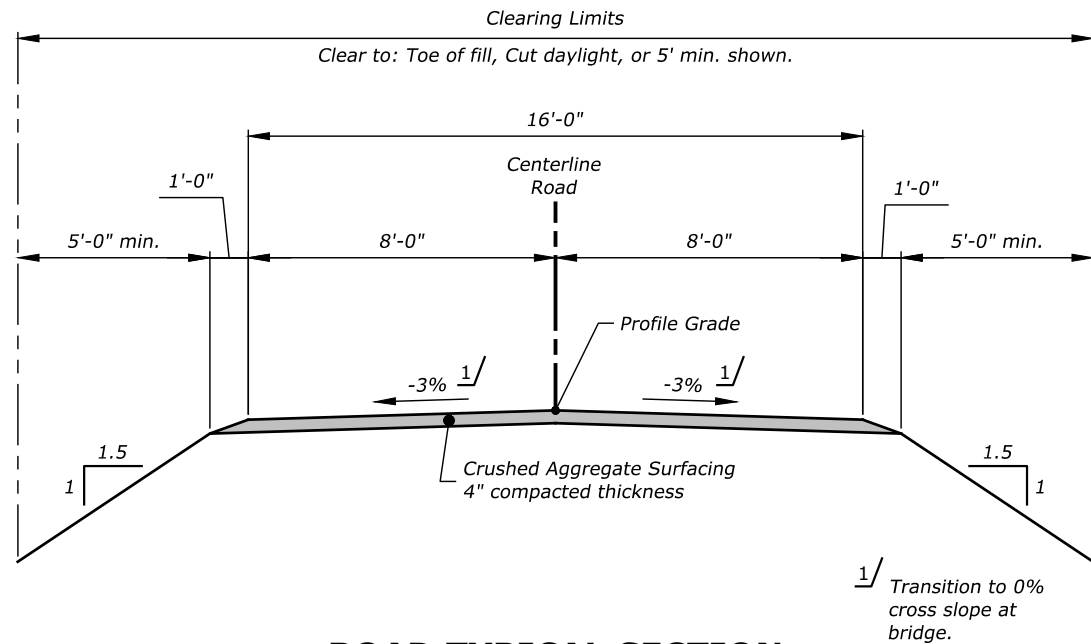
TIMBER INSPECTION AND CERTIFICATION: Contact USFS personnel at least five (5) days prior to shipping and make all timber members available for inspection. Furnish the following compliance certificates upon delivery:

- A. *Supplier certification, from a WWPA or WCLIB approved supplier, that all wood materials meet the requirements as to species and grade.*
- B. *Certification of preservative, penetration in inches, and retention in pounds per cubic foot (Assay Method) by either a qualified testing and inspection agency or supplier certification. Supplier certification requires each solid piece to be stamped or branded with the ALSC quality mark.*
- C. *Certification from a qualified inspection and testing agency indicating conformance of all glue laminated members with AITC 117-93.*
- D. *Supplier certification that all treated wood materials were treated in conformance with and meet the requirements of WWPI's Best Management Practices for the Use of Treated Wood in Aquatic Environments*



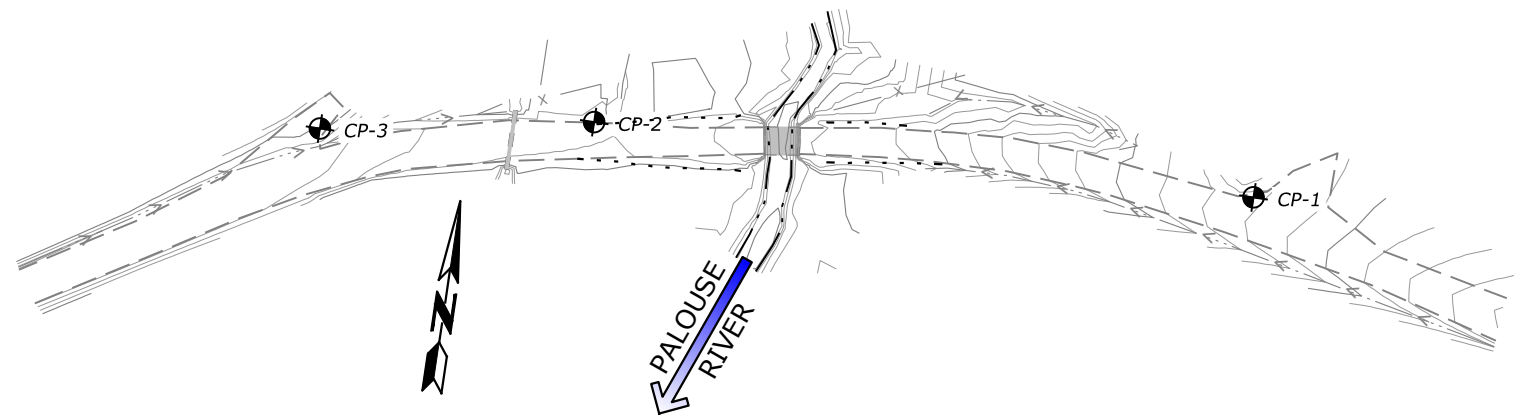
REGION ONE

BY	DATE	REVISION DESCRIPTION	DESIGN <u>CT</u>	PROJ. NO. <u>8812</u>	 <p>NEZ PERCE-CLEARWATER NFs GRAVES MEADOW NFSR 447 MP 8.33</p>	<p>ESTIMATED QUANTITIES & GENERAL NOTES</p>		SHEET	
			DRAWN <u>ASG</u>	DATE <u>Apr-18</u>					OF
			CHECKED <u>MJ</u>	SURVEYED <u>DJA</u>				2	15



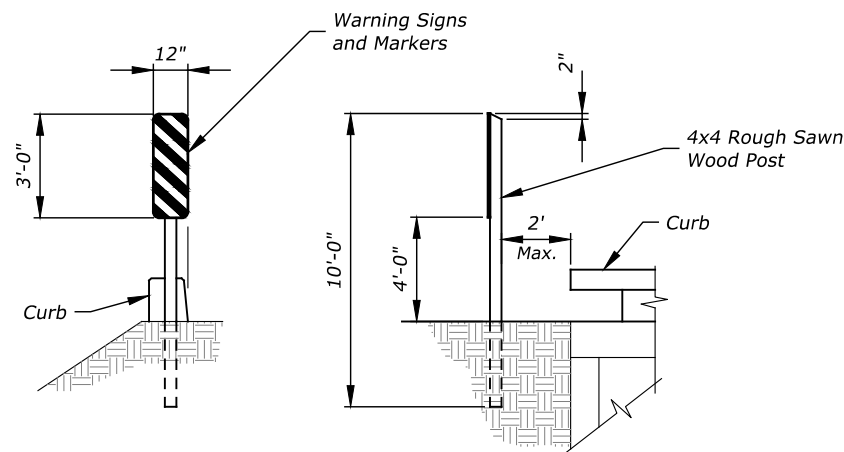
ROAD TYPICAL SECTION

Not to Scale



PROJECT CONTROL

Scale: 1" = 100'



OBJECT MARKERS: Use 12"x 36" Type 3 object markers colored yellow and black. Use material meeting MUTCD OM-3L or OM-3R specifications. Fasten to post w/ (2) 1/4" Ø machine bolts w/ washers. Field drill bolt holes. Install posts such that the inside edge of the reflectorized panel is on line with the inside edge of the curb.

OBJECT MARKER TYPE 3

Not to Scale

ROAD CENTERLINE POINTS

CENTERLINE POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
7000	1932288.1022	2427307.1455	2911.18	STA 1+90
7001	1932289.5734	2427317.0367	2911.45	STA 2+00
7002	1932295.4582	2427356.6014	2913.04	STA 2+40
7003	1932301.3430	2427396.1662	2914.39	STA 2+80
7004	1932301.9359	2427400.1526	2914.45	STA 2+84.03
7005	1932308.6544	2427445.3224	2914.45	STA 3+29.70
7006	1932309.8043	2427453.0534	2914.46	STA 3+37.51 PC
7007	1932312.6353	2427475.3597	2914.68	STA 3+60
7008	1932315.3018	2427515.2610	2915.70	STA 4+00
7009	1932307.1381	2427623.7128		STA 5+08.95 PT

* Centerline Points are at Profile Grade at stations shown.

CONTROL POINTS

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-1	1932312.48	2427669.06	2922.84	SET-RPC
CP-2	1932300.77	2427323.67	2911.26	SET-RPC
CP-3	1932276.44	2427182.91	2915.61	SET-RPC

SET-RPC = Set Rebar with DJ&A Red Plastic Cap

ABUTMENT LAYOUT POINTS

LAYOUT POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
8000	1932315.4484	2427399.2381	2909.14	BOTTOM OF FOOTING
8001	1932302.0953	2427401.2243	2909.14	BOTTOM OF FOOTING
8002	1932288.7422	2427403.2104	2909.14	BOTTOM OF FOOTING
8003	1932321.8482	2427442.2646	2909.14	BOTTOM OF FOOTING
8004	1932308.4951	2427444.2508	2909.14	BOTTOM OF FOOTING
8005	1932295.1420	2427446.2369	2909.14	BOTTOM OF FOOTING

* Abutment layout points are bottom of grade beam elevations.



REGION ONE

BY	DATE	REVISION DESCRIPTION

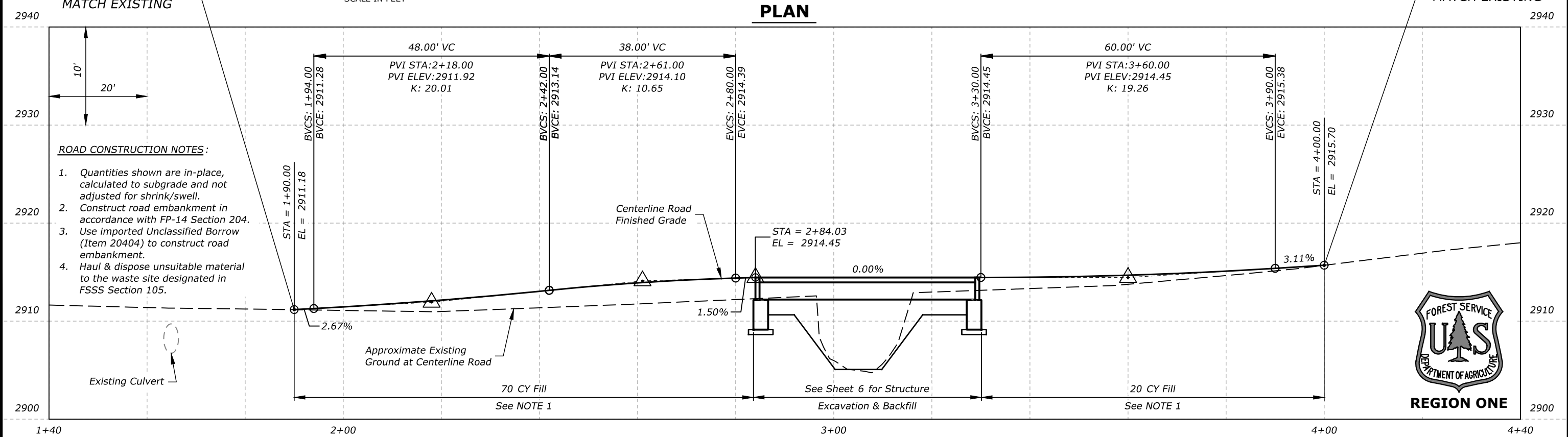
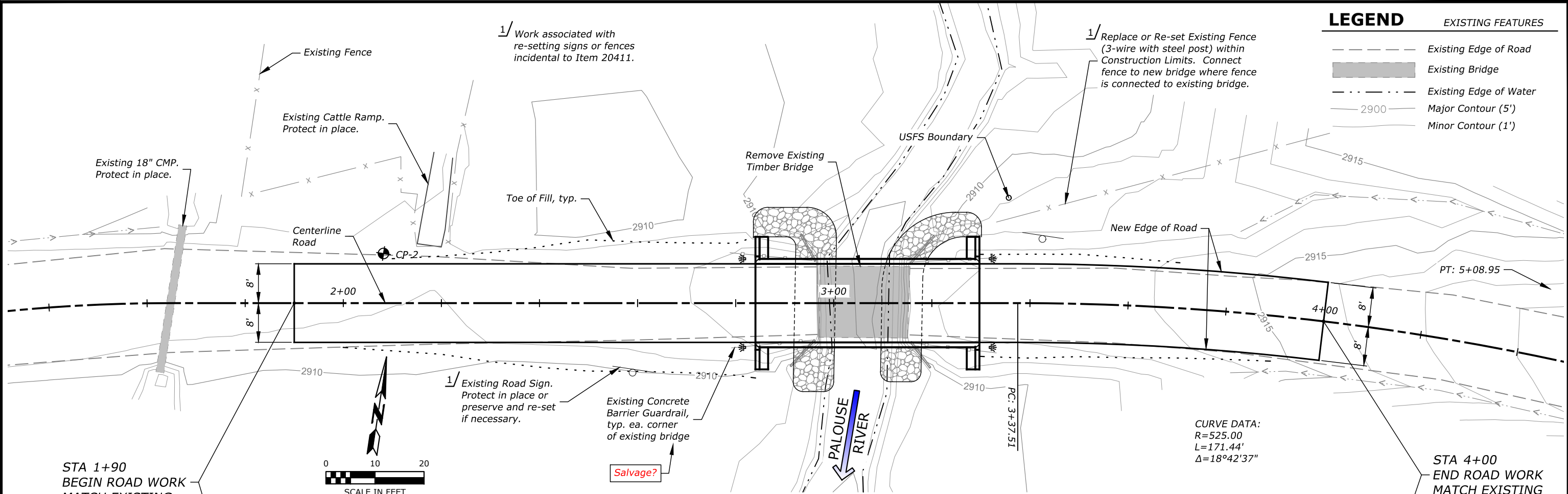
DESIGN	CT	PROJ. NO.	0812
DRAWN	ASG	DATE	Apr-18
CHECKED	WJ	SURVEYED	DJ&A



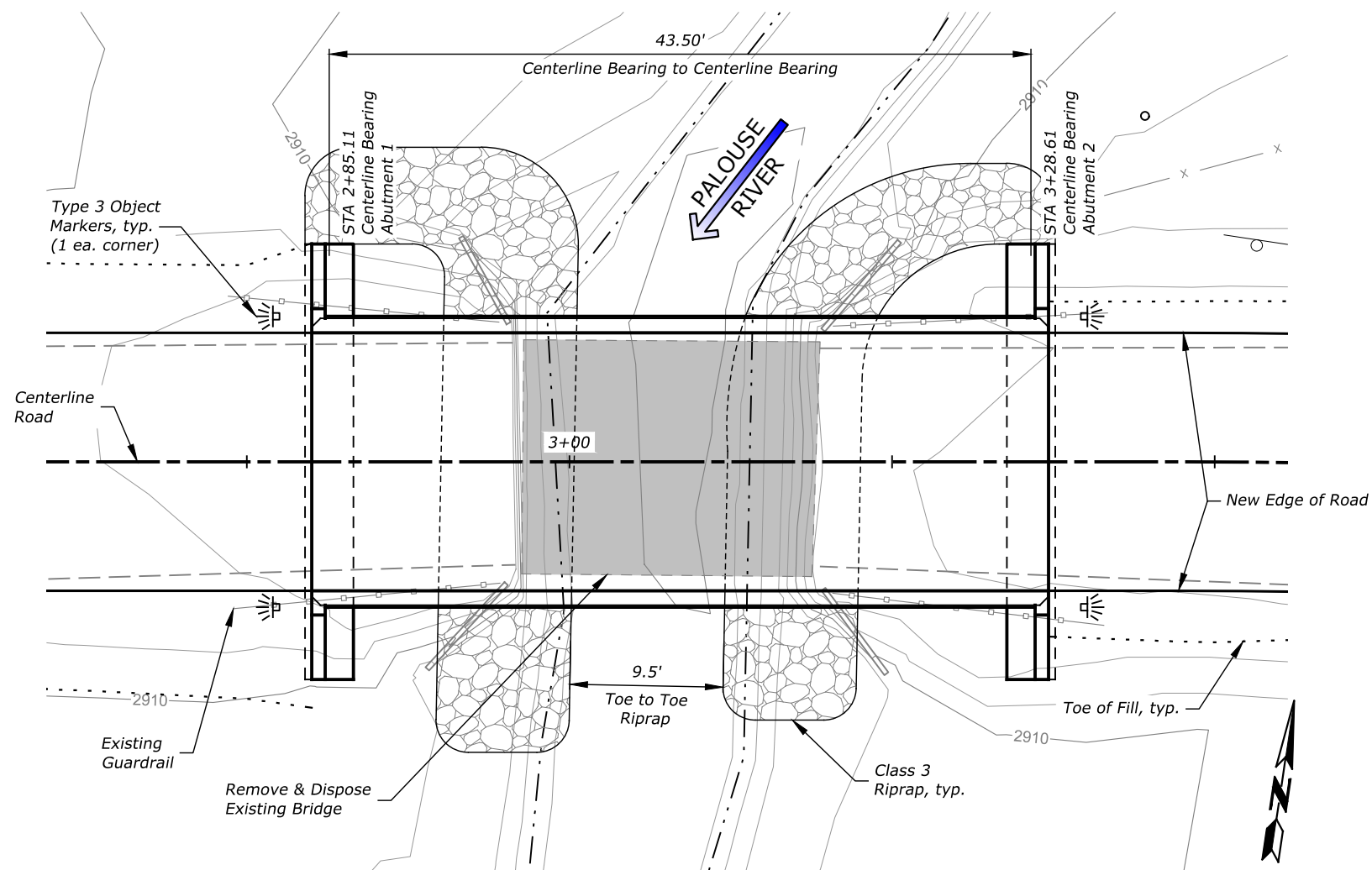
NEZ PERCE-CLEARWATER NFs
GRAVES MEADOW
NFSR 447 MP 8.33

ROAD TYPICAL SECTION & POINT TABLES

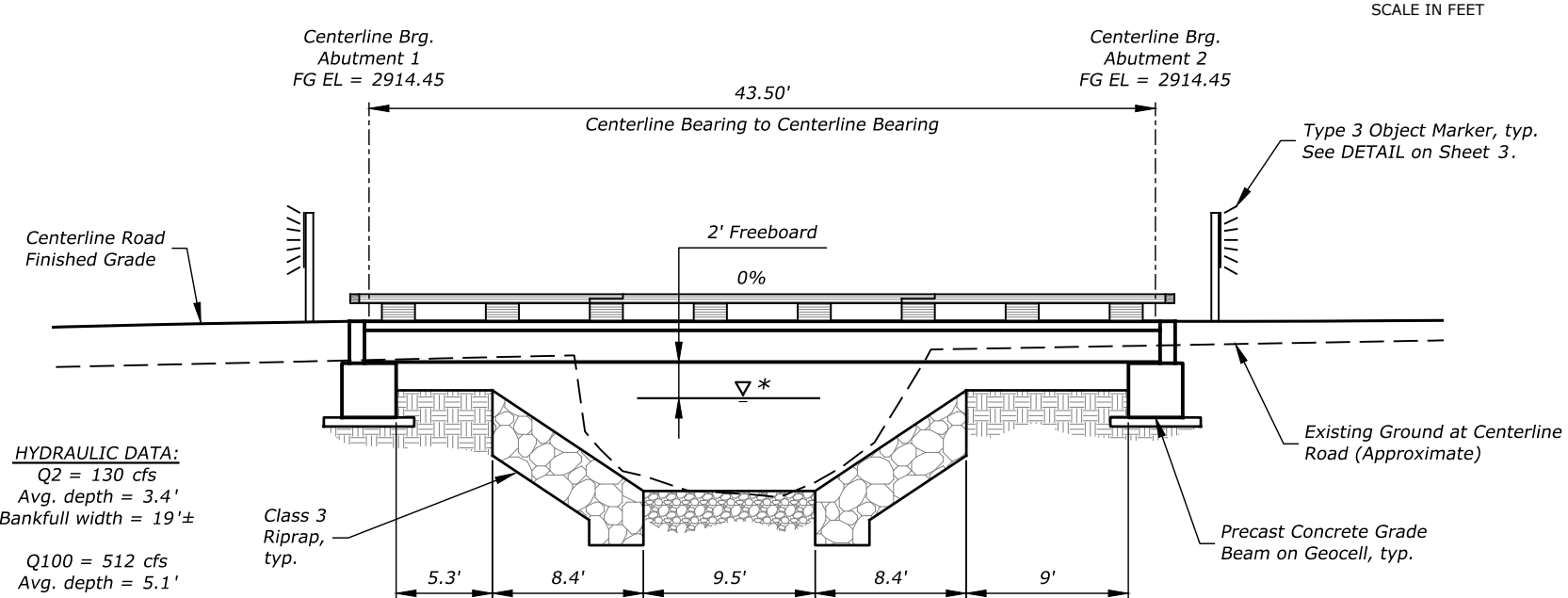
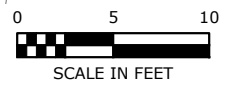
SHEET	
3	15



BY	DATE	REVISION DESCRIPTION	DESIGN	CT	PROJ. NO.	8812	NEZ PERCE-CLEARWATER NFs GRAVES MEADOW NFSR 447 MP 8.33	ROAD PLAN & PROFILE	SHEET	OF
			DRAWN	ASG	DATE	Apr-18			4	15
			CHECKED	MJ	SURVEYED	DJ&A				



PLAN

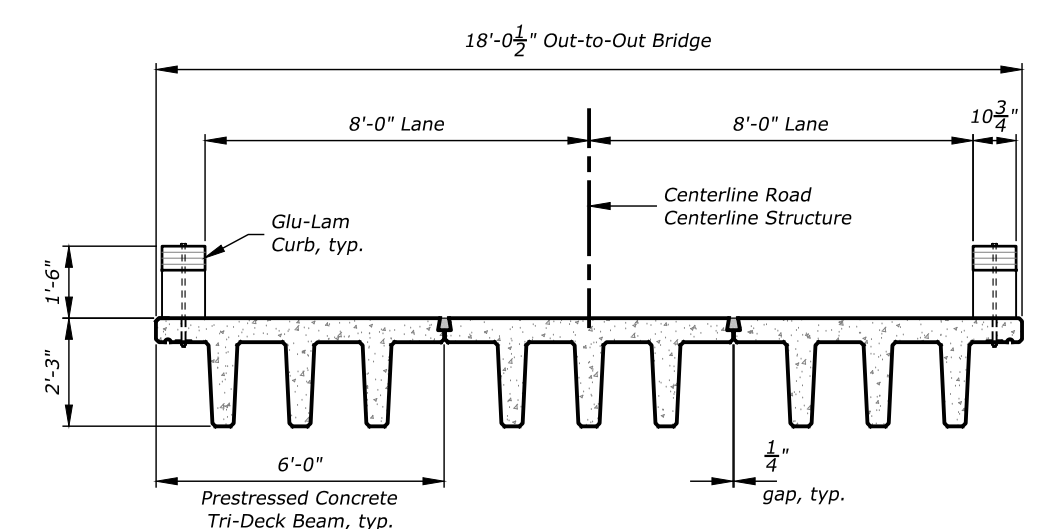


ELEVATION

Scale: 1" = 10'

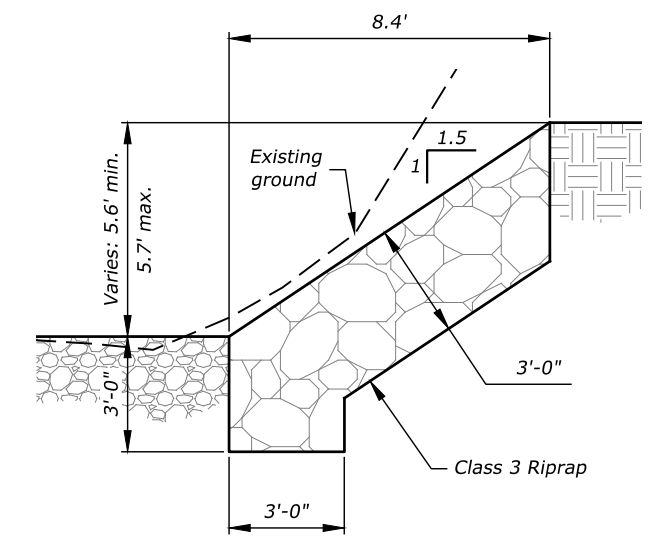
HYDRAULIC DATA:
 Q2 = 130 cfs
 Avg. depth = 3.4'
 Bankfull width = 19'±
 Q100 = 512 cfs
 Avg. depth = 5.1'

*Q100 = 2910.20
 at upstream edge
 of bridge



TYPICAL SECTION

Scale: 1/4" = 1'-0"



DETAIL

Not to Scale



REGION ONE

BY	DATE	REVISION DESCRIPTION

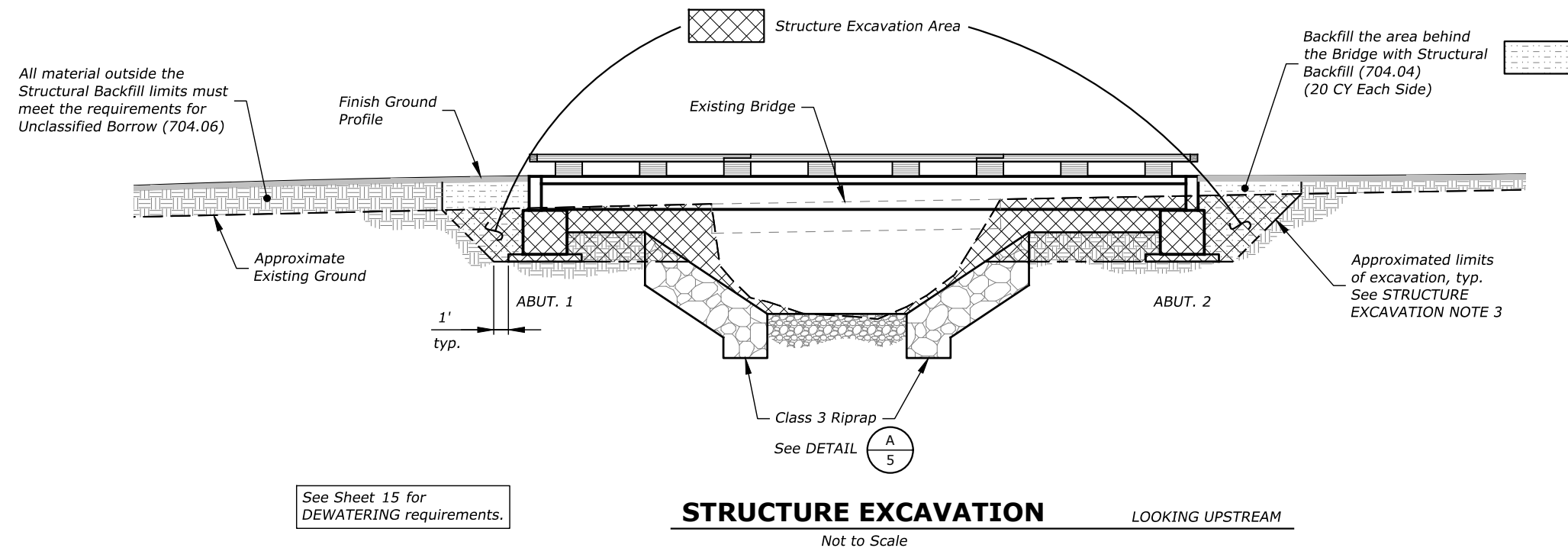
DESIGN	CT	PROJ. NO.	0812
DRAWN	ASG	DATE	Apr-18
CHECKED	WJ	SURVEYED	DJ&A

DJ&A, P.C.
 CONSULTING ENGINEERS & LAND SURVEYORS
 3203 Russell Street, Missoula, Montana 59801-8591
 Phone 406/721-4320 Fax 406/549-6371

**NEZ PERCE-CLEARWATER NFs
 GRAVES MEADOW
 NFSR 447 MP 8.33**

BRIDGE GENERAL LAYOUT

SHEET	OF
5	15



STRUCTURE EXCAVATION NOTES:

1. Complete Structure Excavation in accordance with FP-14 Section 208.
2. The Contractor is solely responsible for excavation support and compliance with all applicable OSHA regulations.
3. Excavation limits shown are approximate based on OSHA sloping and benching requirements and an assumed soil type from limited surface observations at the site. Actual conditions may vary. The Contractor is responsible for making adjustments to the cut slopes and excavation quantities based on the actual soil types encountered. Notify the CO immediately if bedrock or soft, unsuitable soils are found.
4. Submit an Excavation Plan for approval that includes, as a minimum, the following: drawings and a written outline illustrating and describing the proposed excavation limits, methods, equipment to be used, location of stockpiles, and estimated quantities. The Excavation Plan must comply with all applicable OSHA requirements. Changes to the excavation limits shown here for the Contractor's dewatering methods or Contractor convenience must be shown on the Plan and are the responsibility of the Contractor. The Excavation Plan is incidental to the work.

BACKFILL NOTES:

1. Place Structural Backfill meeting FP-14 Subsection 704.04 at the ends of the bridge in accordance with Subsection 208.10 and compact in accordance with Subsection 208.10.
2. The Structural Backfill limits shown here are the minimum requirements.
3. It is assumed that material from Structure Excavation at this site will not be suitable for re-use. Remove and haul all unsuitable material to the designated waste site.
4. Any material outside the limits shown for Structural Backfill must meet the requirements of Subsection 704.06, Unclassified Borrow.



REGION ONE

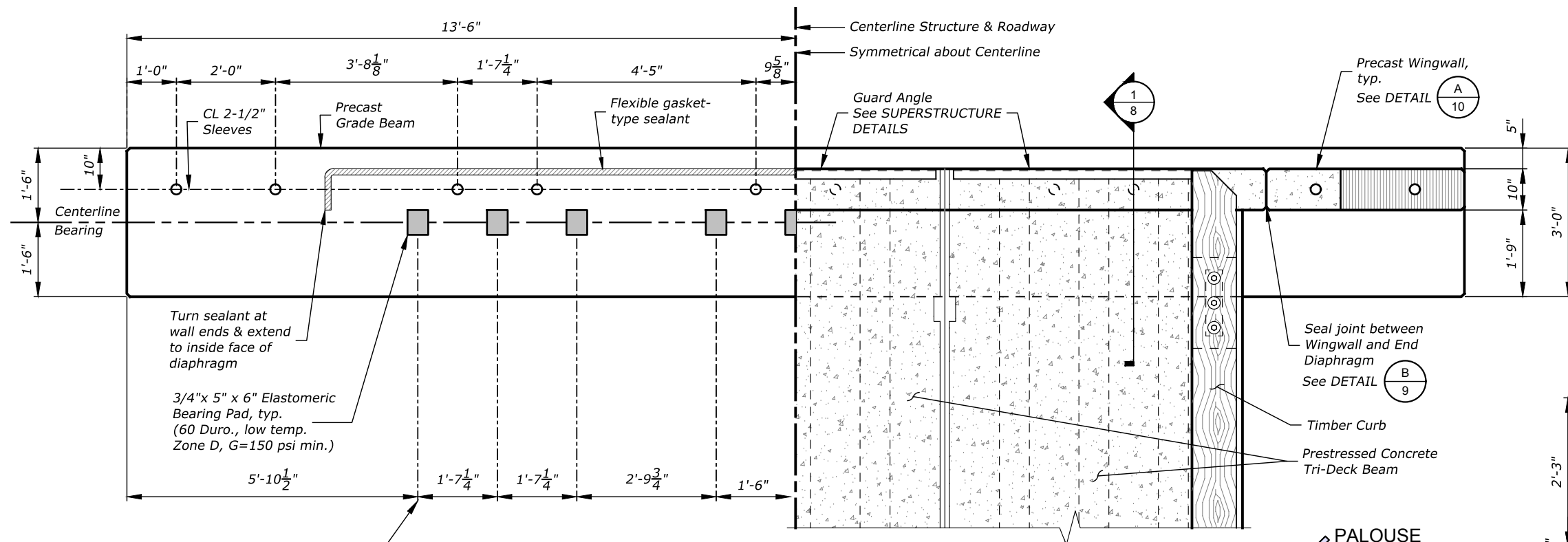
BY			DATE			REVISION DESCRIPTION		

DESIGN	CT	PROJ. NO.	0812
DRAWN	ASG	DATE	Apr-18
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NEZ PERCE-CLEARWATER NFs GRAVES MEADOW NFSR 447 MP 8.33			

STRUCTURE EXCAVATION & BACKFILL	
---------------------------------	--

SHEET		OF
6	15	

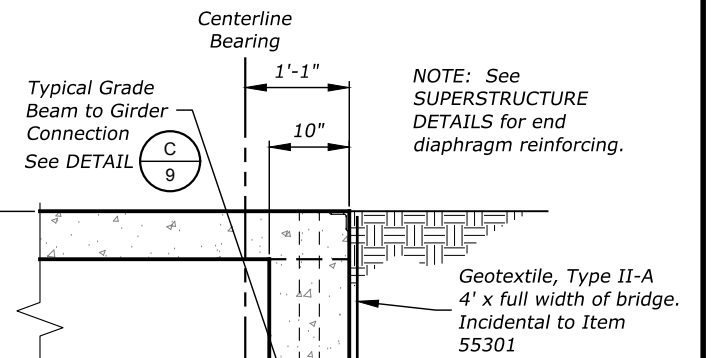


ABUTMENT PLAN

Scale: 3/8" = 1'-0"

ABUTMENT 1 SHOWN
ABUTMENT 2 SIMILAR

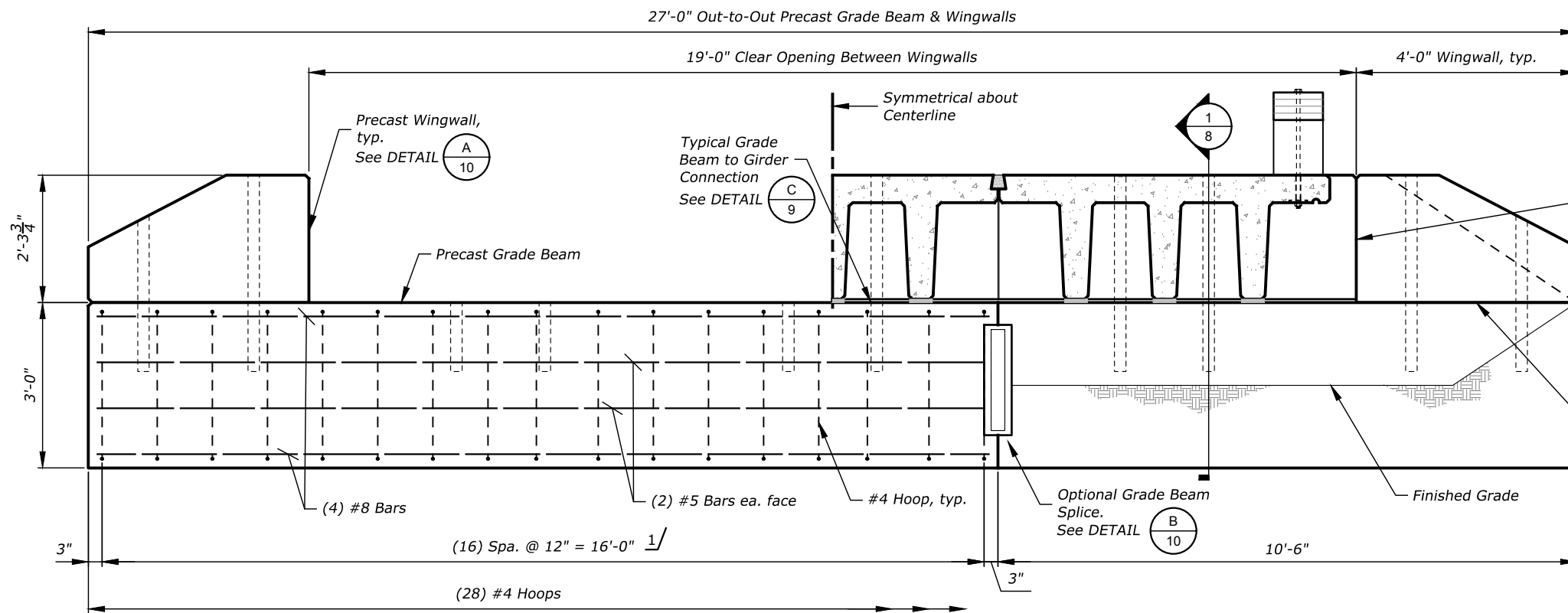
NOTE: PRECAST GRADE BEAMS AND WINGWALLS MUST BE CAST AND SUPPLIED BY THE SAME MANUFACTURER THAT FABRICATES THE PRESTRESSED BEAMS.



SECTION

Scale: 1/2" = 1'-0"

ABUTMENT 1 Shown
ABUTMENT 2 Similar



ABUTMENT ELEVATION

Scale: 3/8" = 1'-0"

LOOKING BACK ON-LINE
ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR

1/ Adjust hoop spacing where necessary to avoid conflict with embedded anchor bolts and sleeves.



REGION ONE

BY	DATE	REVISION DESCRIPTION

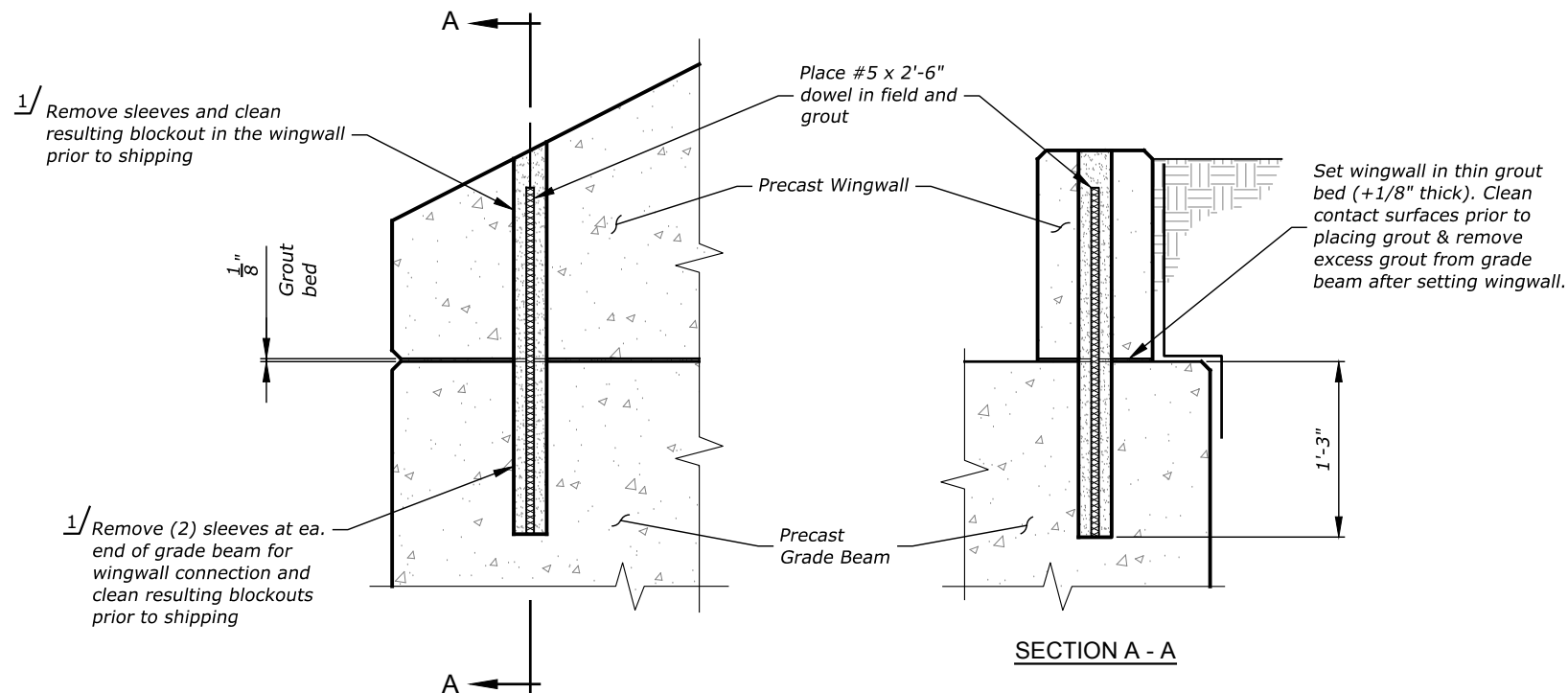
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DRAWN	ASG	DATE	Apr-18
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CONSULTING ENGINEERS & LAND SURVEYORS
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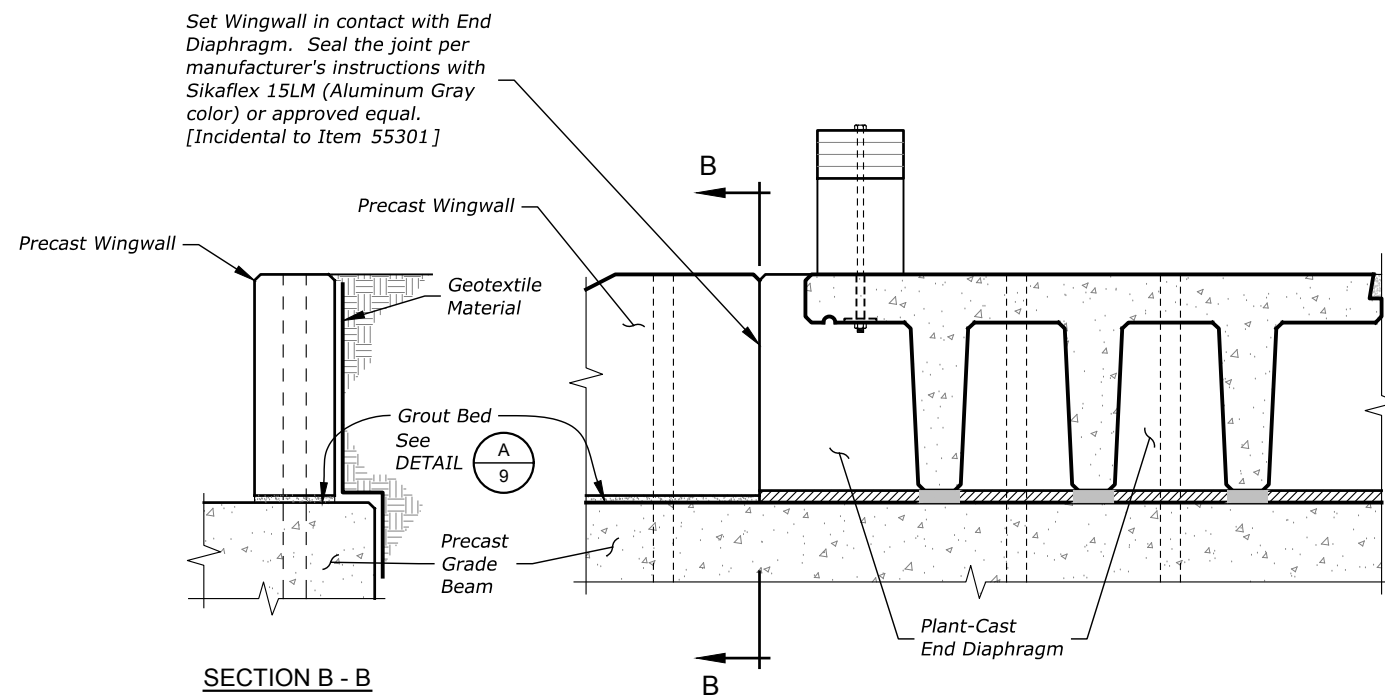
**NEZ PERCE-CLEARWATER NFs
GRAVES MEADOW
NFSR 447 MP 8.33**

ABUTMENT PLAN & DETAILS

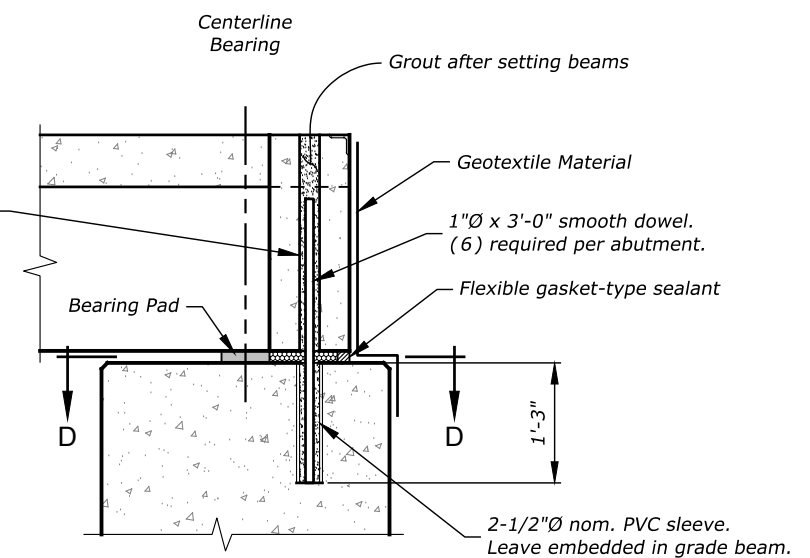
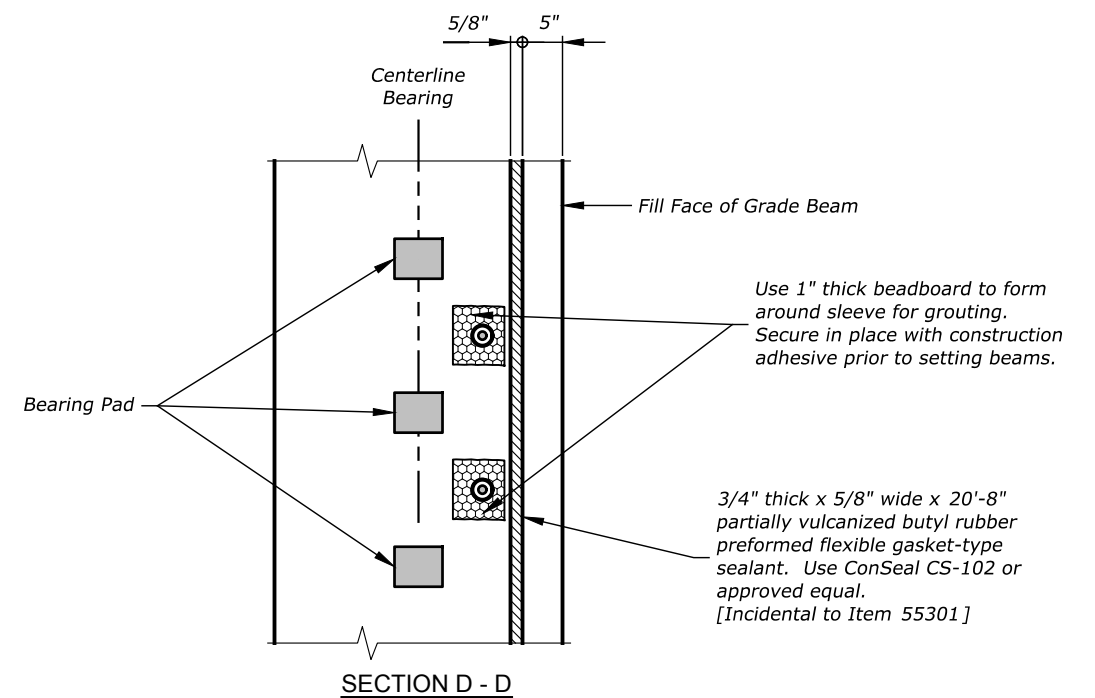
SHEET	OF
8	15



DETAIL GRADE BEAM TO WINGWALL CONNECTION
Scale: 3/4" = 1'-0"



DETAIL WINGWALL TO END DIAPHRAGM CONNECTION
Scale: 1/2" = 1'-0"

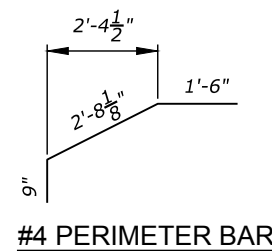
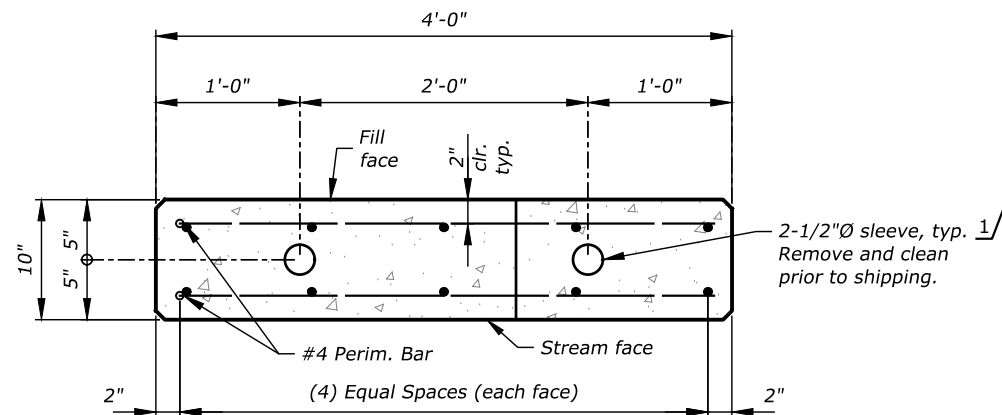


DETAIL GRADE BEAM TO GIRDER CONNECTION
Scale: 1/2" = 1'-0"

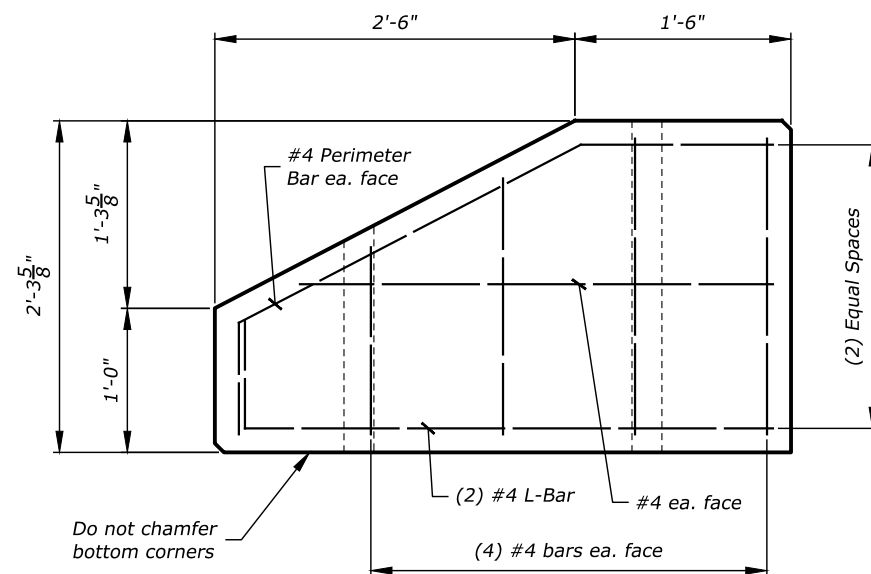
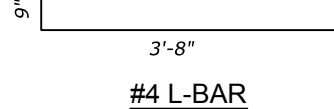


REGION ONE

BY	DATE	REVISION DESCRIPTION	DESIGN	CT	PROJ. NO.	9812		NEZ PERCE-CLEARWATER NFs GRAVES MEADOW NFSR 447 MP 8.33	ABUTMENT DETAILS	SHEET	
			DRAWN	ASG	DATE	Apr-18				9	15
			CHECKED	MJ	SURVEYED	DJ&A					



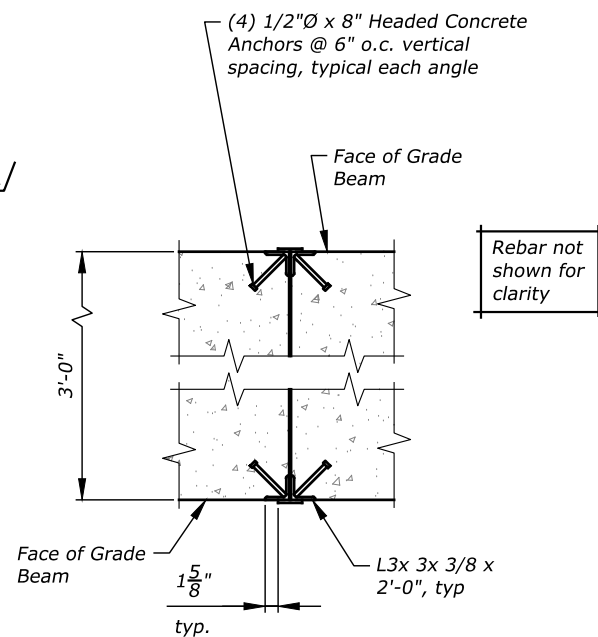
SECTION D - D



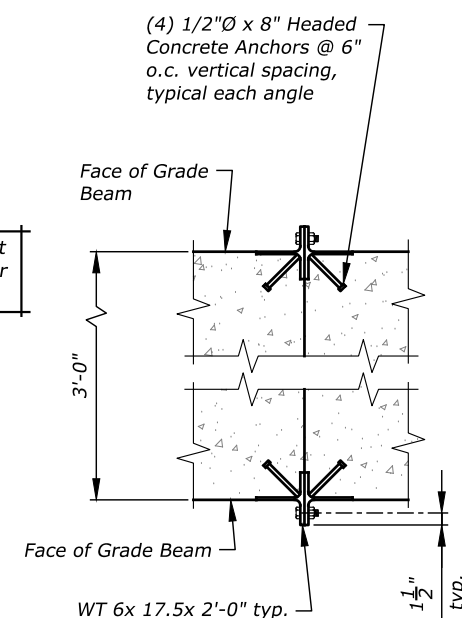
ELEVATION

DETAIL WINGWALL
Scale: 3/4" = 1'-0"

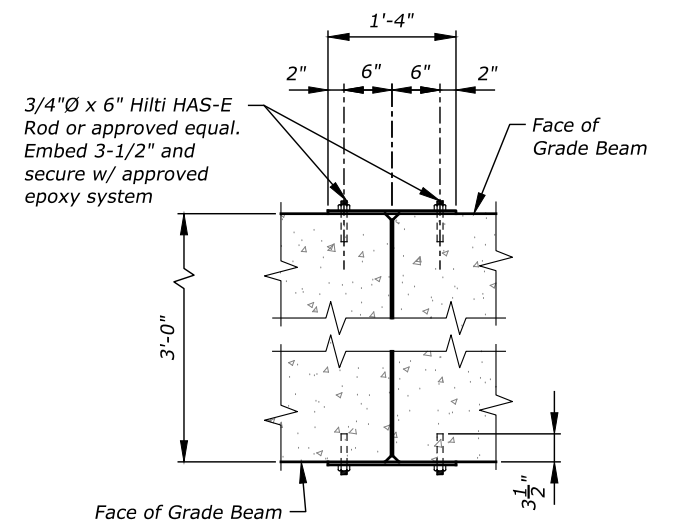
1/ Fabricator may use post tensioning duct in lieu of PVC to form blockouts where PVC sleeves are to be removed. P/T duct may be left in place.



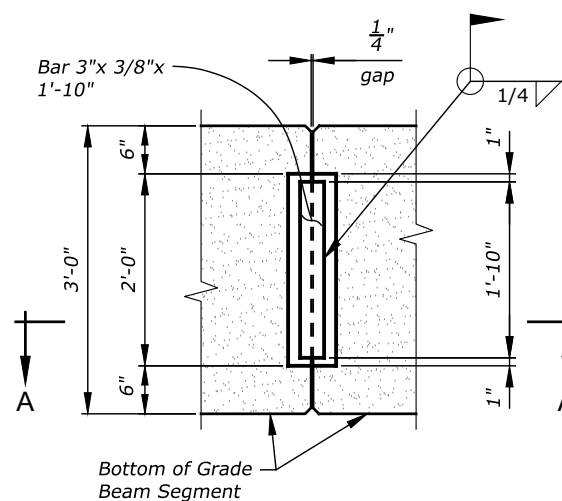
SECTION A - A



SECTION B - B

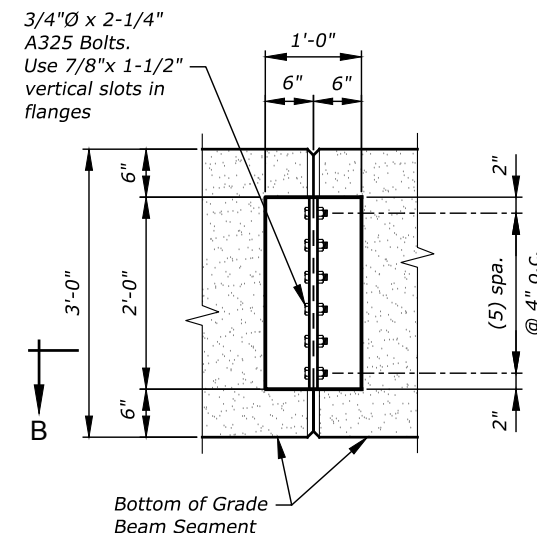


SECTION C - C



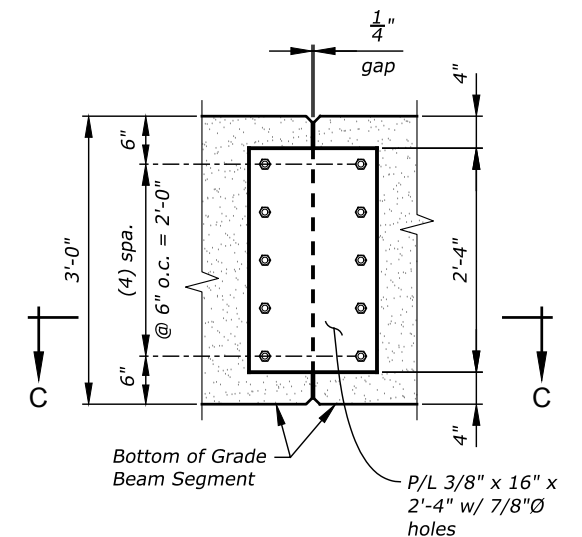
ELEVATION

FIELD WELD ALTERNATE



ELEVATION

FIELD BOLT ALTERNATE



ELEVATION

POST-INSTALLED ANCHOR ALTERNATIVE

DETAIL OPTIONAL GRADE BEAM SPLICE
Scale: 1/2" = 1'-0"



REGION ONE

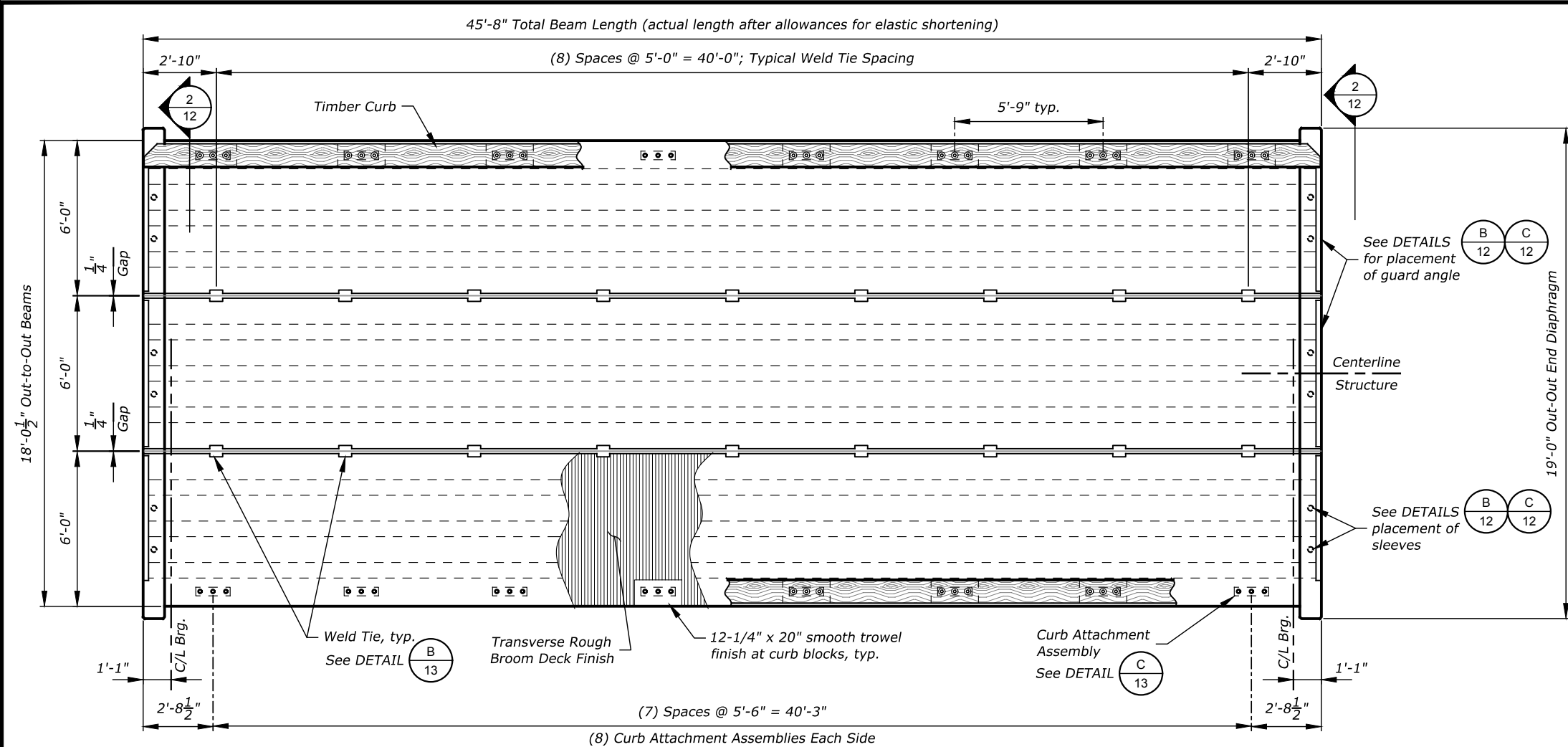
BY	DATE	REVISION DESCRIPTION	DESIGN	CT	PROJ. NO.	8812
			DRAWN	ASG	DATE	Apr-18
			CHECKED	MJ	SURVEYED	DJ&A

CONSULTING ENGINEERS & LAND SURVEYORS
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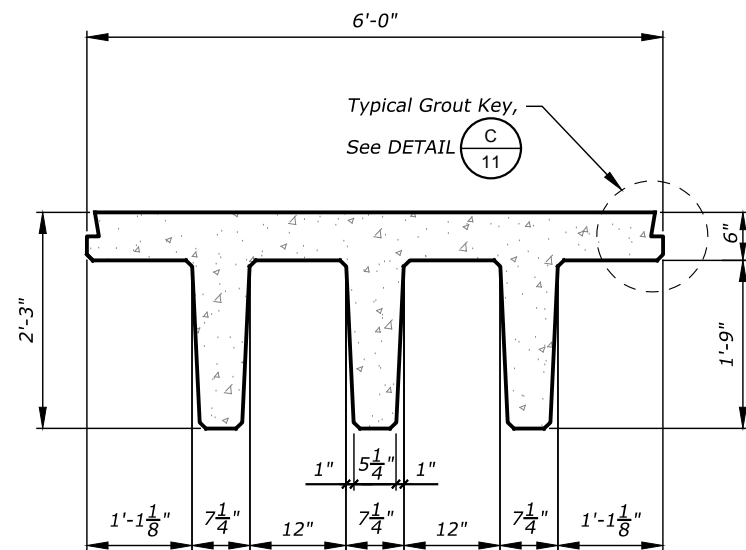
**NEZ PERCE-CLEARWATER NFs
GRAVES MEADOW
NFSR 447 MP 8.33**

ABUTMENT DETAILS

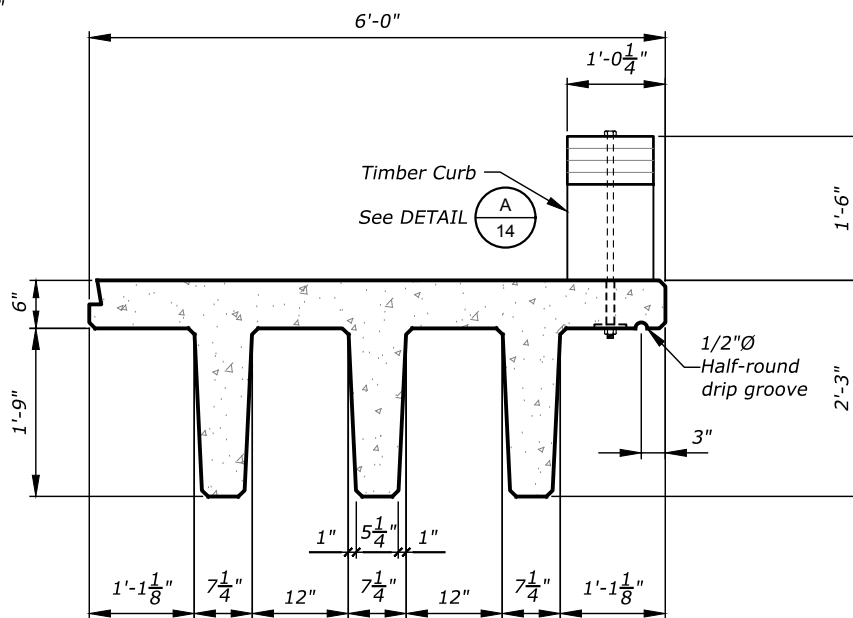
SHEET	OF
10	15



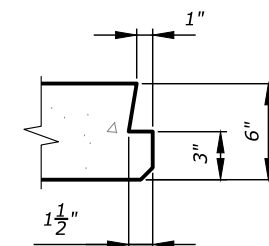
SUPERSTRUCTURE PLAN
Scale: 3/16" = 1'-0"



DETAIL A
11
Scale: 1/2" = 1'-0"



DETAIL B
11
Scale: 1/2" = 1'-0"



NOTE: BEAM FABRICATOR
MAY SUBMIT ALTERNATE
GROUT KEY DETAIL FOR
APPROVAL

DETAIL C
11
Scale: 1" = 1'-0"

PRESTRESSED BEAM NOTES

Pretensioning is the only acceptable method of prestressing for this project.

Provide the final design for all prestressed reinforcement and non-prestressed reinforcement in the section shown on this sheet. Verify that the allowable stress and ultimate strength requirements are met at all stages of construction. The design documents must bear the seal of a Professional Engineer licensed in Idaho. Submit calculations and shop drawings in accordance with Section 553 of the Standard Specifications at least 30 days prior to casting any members. See GENERAL NOTES on Sheet 2 for additional design and material specifications.

Design in accordance with the AASHTO LRFD Bridge Design Specifications, 8th Edition. Design notes are as follows:

- HL-93 Live Load with Impact
- Superimposed dead load is 35 PSF for a future wearing surface. Superimposed dead load may be assumed to be equally distributed to all three beams.
- Assume moderate corrosive conditions for tensile stress limits at Service Limit State after losses.
- Either approximate or refined methods for estimating prestress losses may be used.

FINISHING CONCRETE: Finish the bottoms of all beams and the exterior face of all exterior beams in accordance with the specifications except a concrete gray epoxy mortar using AASHTO M235 Class II Epoxy Resin Adhesive may be used instead of the specified sand-cement mortar to reduce curing time. Rub the epoxy mortar with cement prior to hardening. Finish the beam ends so that all holes or acceptable rock pockets are patched and the strands are cut off flush or burned back.

PAINTING OF WELD TIE CONNECTIONS AND GUARD ANGLES: Galvanize or paint guard angles or weld ties not covered by 1 inch or more of concrete. If painting, use one primer coat and two field coats of aluminum paint conforming to AASHTO M69, Type II.

ALTERNATE SUPERSTRUCTURE SECTION: An alternate section of precast, prestressed concrete only may be proposed. The alternate section must provide the minimum clear opening between curb shown on Sheet 5 but may deviate up to 3" maximum in overall depth. Maintain the finished grade elevations and make any elevation adjustments to the abutment elevations. The Contractor is responsible for revisions required to the details shown in these drawings. Submit all revisions with the shop drawings and design calculations.

See General Notes on Sheet 2 for installation requirements.



REGION ONE

BY	DATE	REVISION DESCRIPTION

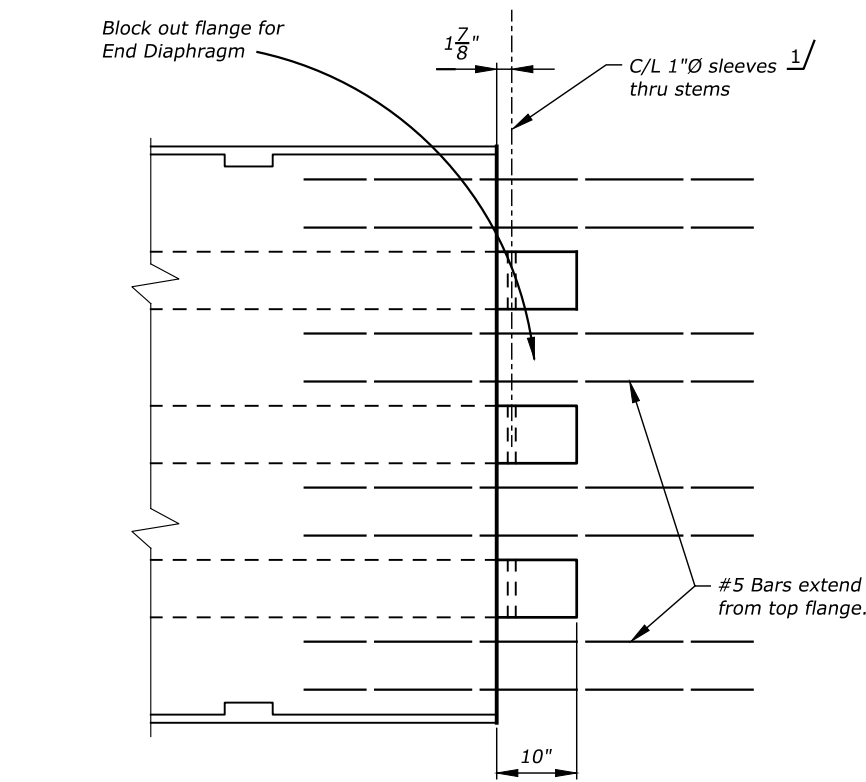
DESIGN	CT	PROJ. NO.	0812
DRAWN	ASG	DATE	Apr-18
CHECKED	MJ	SURVEYED	DWA



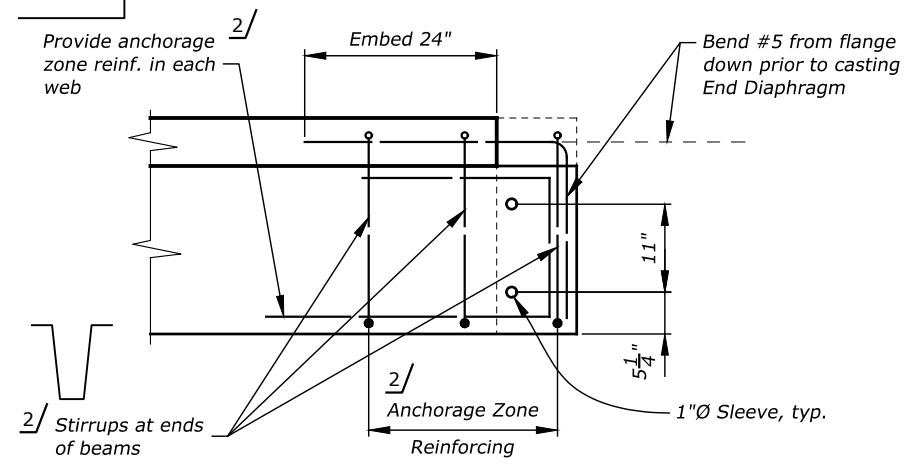
**NEZ PERCE-CLEARWATER NFs
GRAVES MEADOW
NFSR 447 MP 8.33**

SUPERSTRUCTURE PLAN

SHEET	OF
11	15

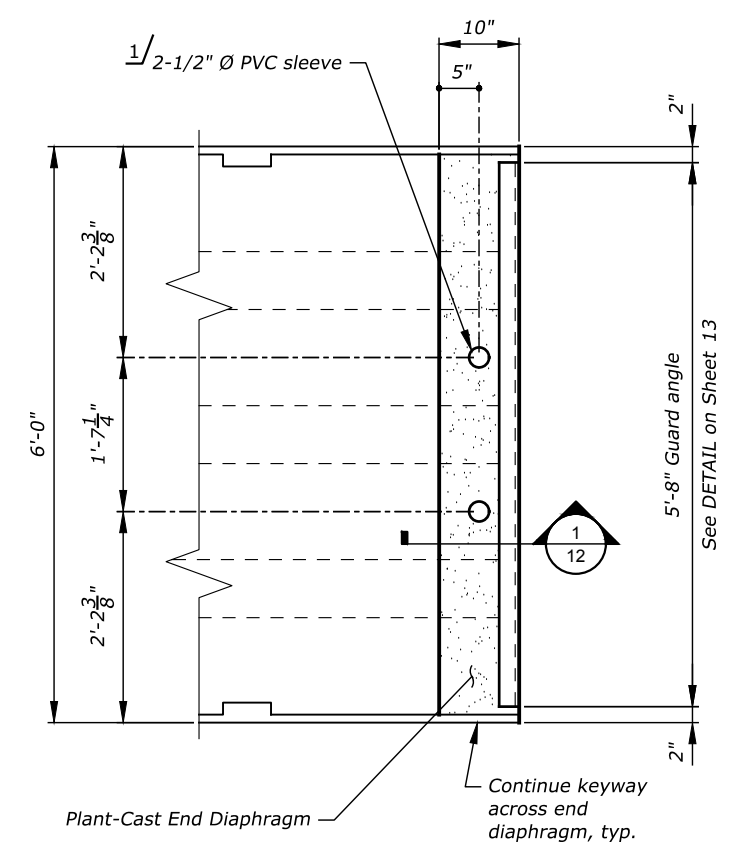


PLAN

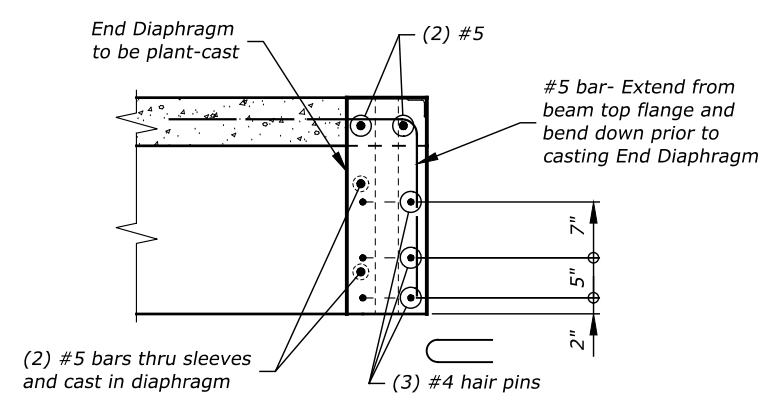


A **DETAIL** GIRDER END DETAIL
12 Scale: 1/2" = 1'-0"

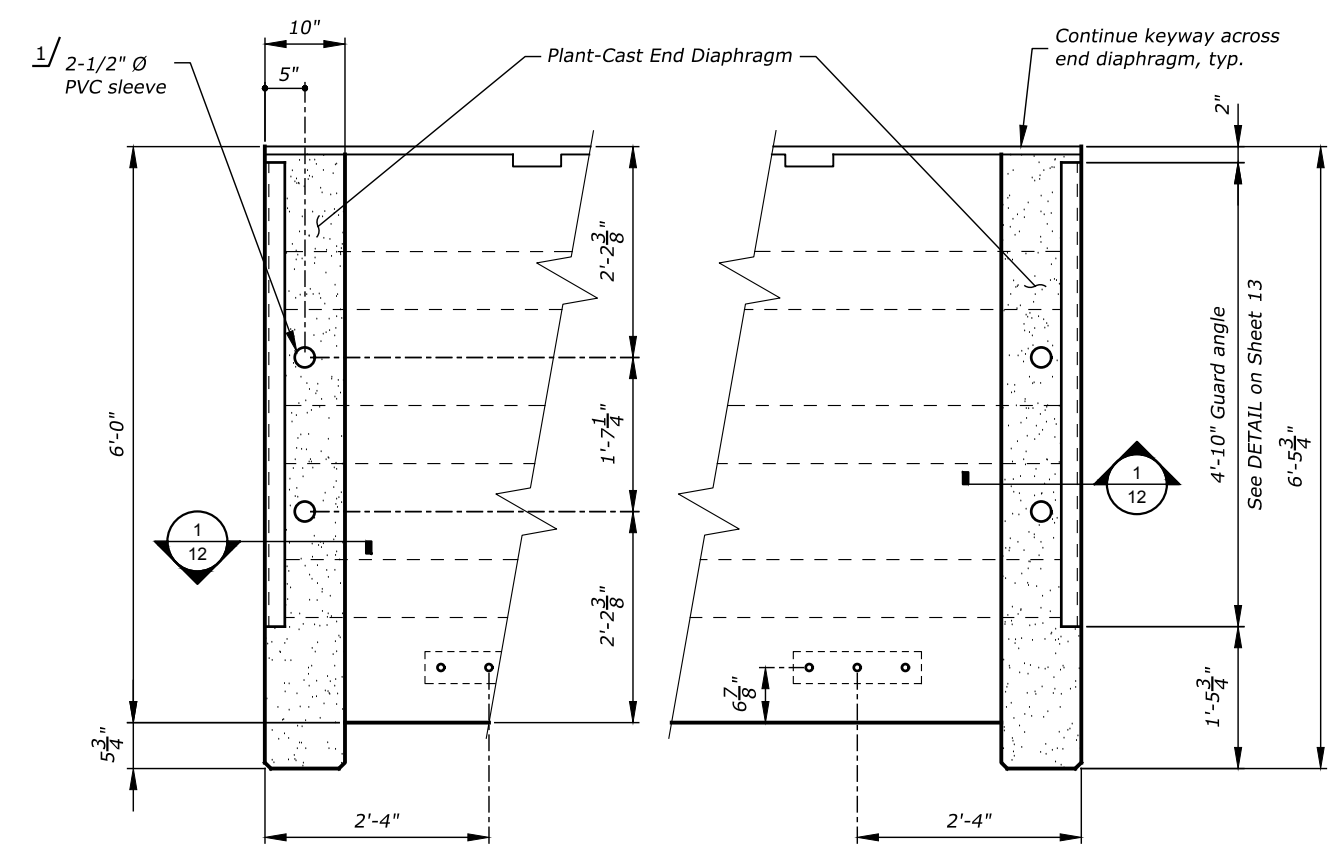
- 1/ Remove sleeve and clean resulting blockout prior to shipping beam. Fabricator may use post tensioning duct in lieu of PVC to form blockouts where PVC sleeves are to be removed. P/T duct may be left in place.
- 2/ Provide reinforcing in the anchorage zone for splitting resistance and confinement in accordance with AASHTO LRFD 5.10.10.1 and 5.10.10.2, respectively.



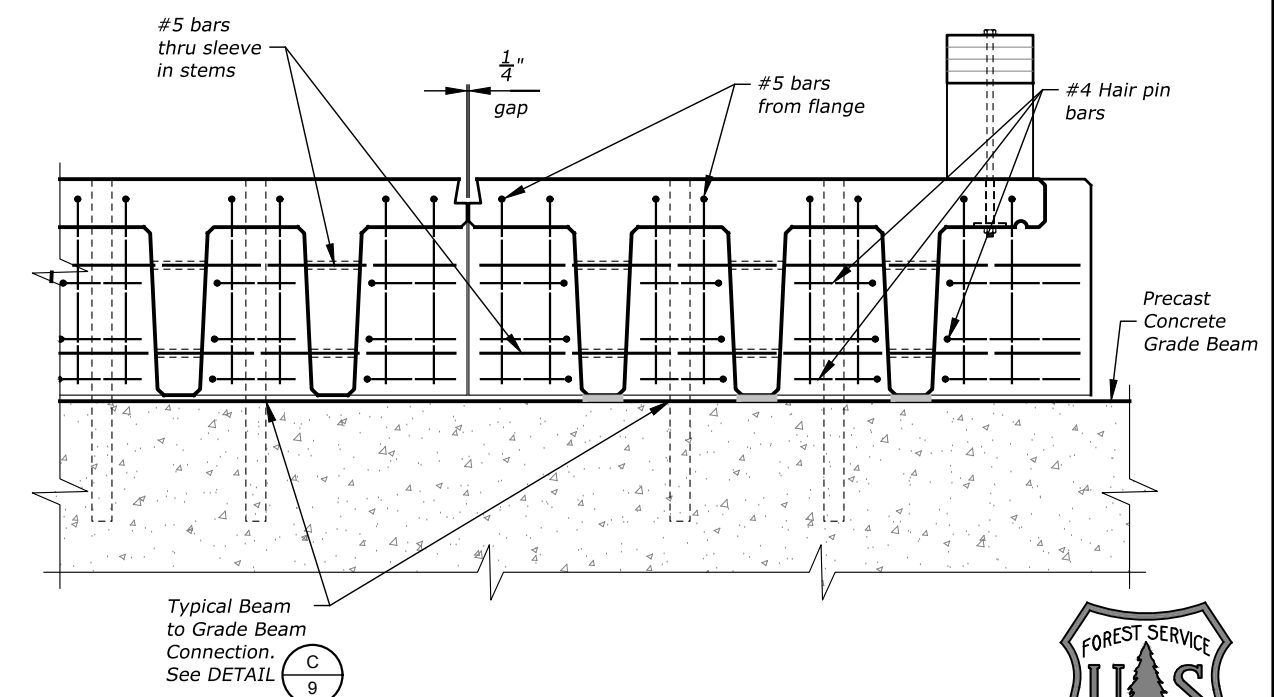
B **DETAIL** INTERIOR BEAM
12 Scale: 1/2" = 1'-0"



1 **SECTION** END DIAPHRAGM
12 Scale: 1/2" = 1'-0"



C **DETAIL** EXTERIOR BEAM
12 Scale: 1/2" = 1'-0"



2 **SECTION** END DIAPHRAGM
12 Scale: 1/2" = 1'-0"



REGION ONE

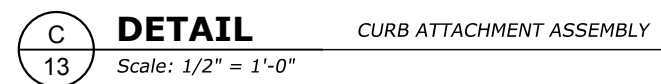
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			DRAWN	ASG	DATE	Apr-18
			CHECKED	MJ	SURVEYED	DWA

D&A P.C.
CONSULTING ENGINEERS & LAND SURVEYORS
3203 Russell Street, Missoula, Montana 59801-8591
Phone 406/721-4320 Fax 406/549-6371

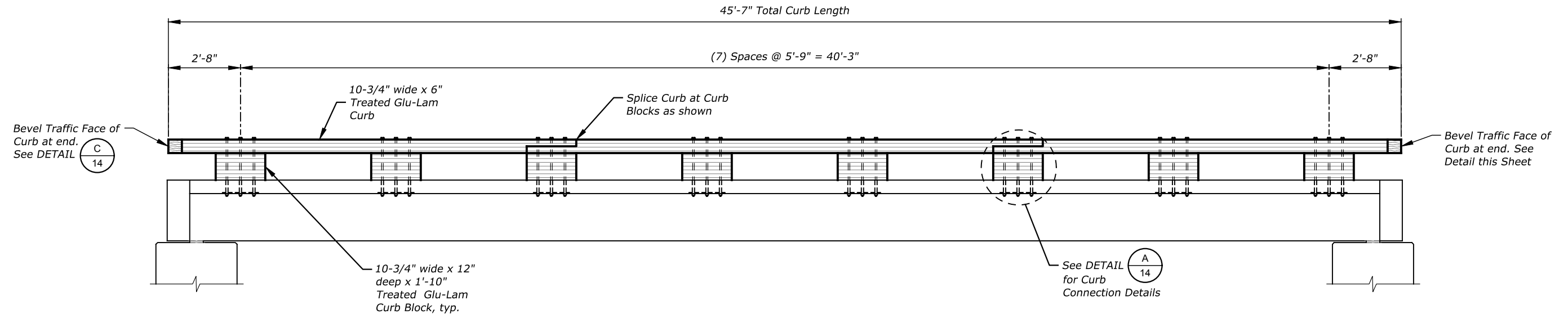
NEZ PERCE-CLEARWATER NFs
GRAVES MEADOW
NFSR 447 MP 8.33

SUPERSTRUCTURE DETAILS

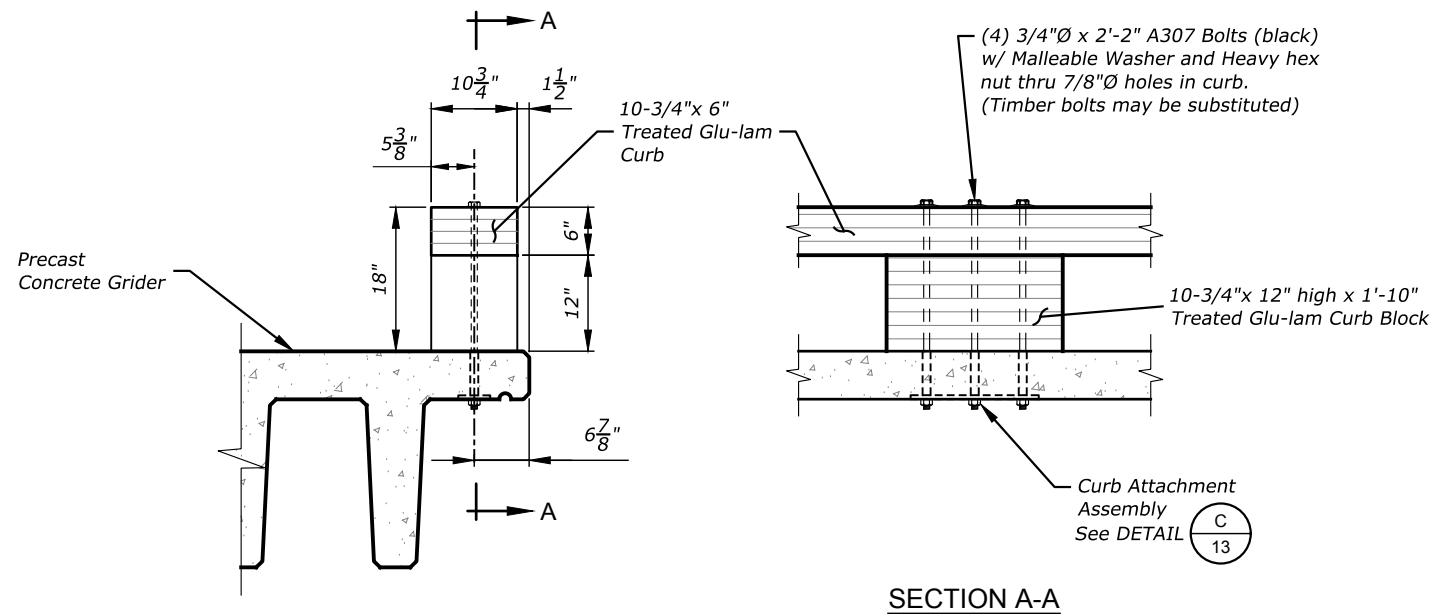
SHEET	
12	15



BY	DATE	REVISION DESCRIPTION	DESIGN	CT	PROJ. NO.	6812	 Dj & A, P.C. CONSULTING ENGINEERS & LAND SURVEYORS 3203 Russell Street, Missoula, Montana 59801-6891 Phone 406/721-4320 Fax 406/549-6371	NEZ PERCE-CLEARWATER NFs GRAVES MEADOW NFSR 447 MP 8.33	SUPERSTRUCTURE DETAILS	SHEET	
			DRAWN	ASQ	DATE	Apr-18					OF
			CHECKED	MJ	SURVEYED	DJAA				13	15



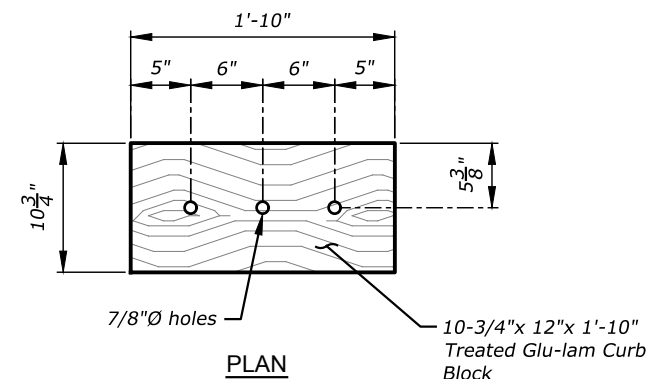
CURB ELEVATION
Scale: 1/4" = 1'-0"



SECTION A-A

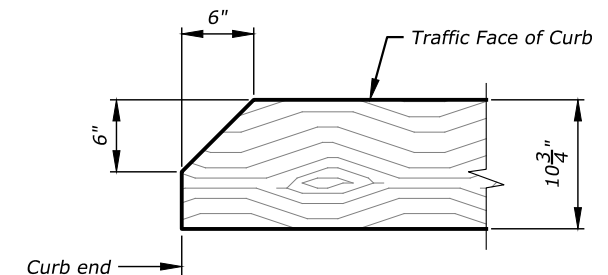
ELEVATION

DETAIL A 14 **TIMBER CURB CONNECTION**
Scale: 1/2" = 1'-0"



PLAN

DETAIL B 14 **CURB BLOCK**
Scale: 3/4" = 1'-0"



PLAN

DETAIL C 14 **TYPICAL CURB END**
Scale: 3/4" = 1'-0"



REGION ONE

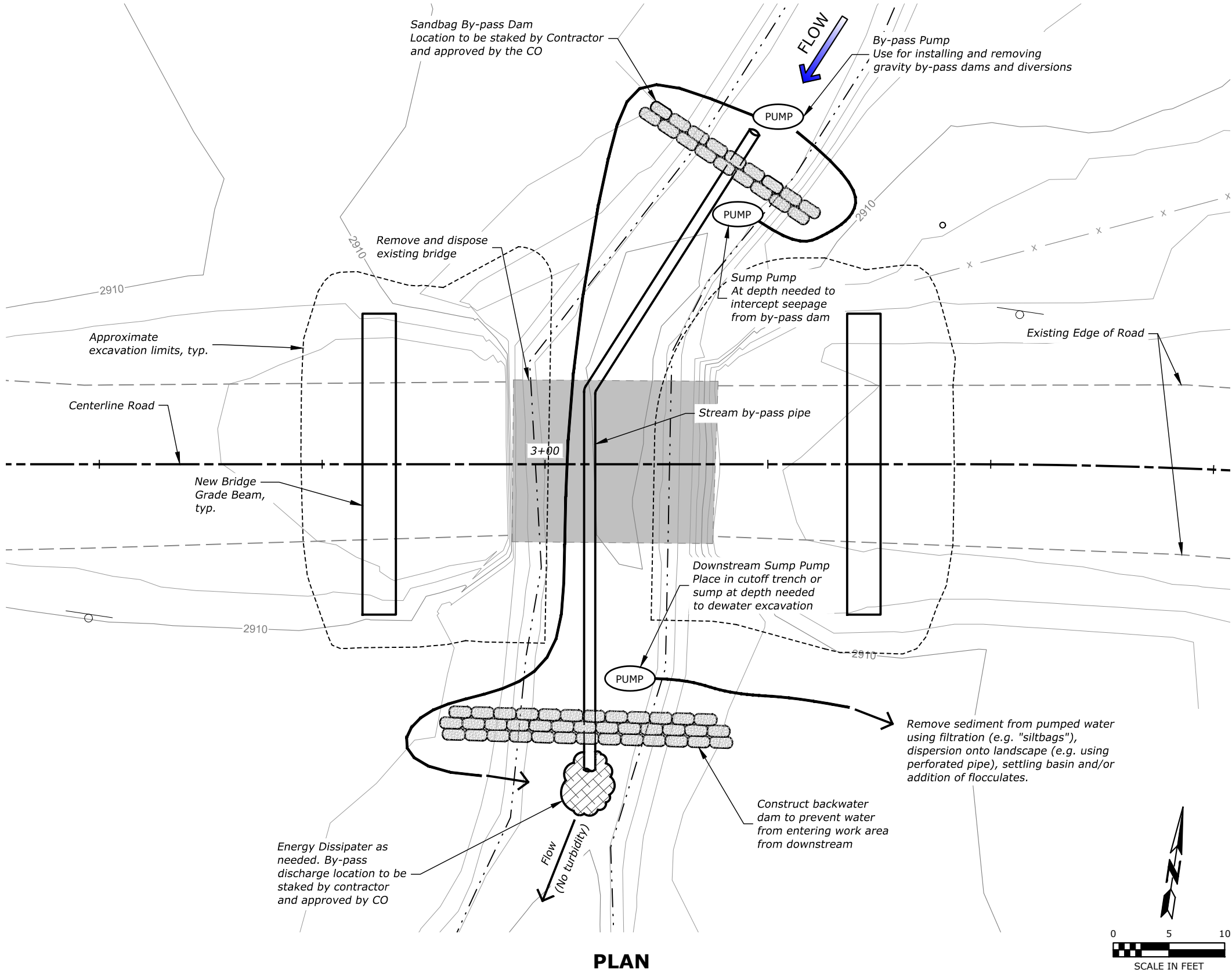
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			DRAWN	ASG	DATE	Apr-18				14	OF
			CHECKED	MJ	SURVEYED	DJ&A				14	15

NOT FOR
CONSTRUCTION

CONTRACTOR SUBMITTAL &
APPROVAL BY CO REQUIRED
ACCORDING TO FSSS 157

NOTES:

- 1. Dewater excavations in accordance with FP-14 Sections 208, 209 and 157, as applicable, and the requirements shown. Protect against soil erosion and sedimentation during construction in accordance with FP-14 Section 157 and the project permits.
- 2. Dewatering is the sole responsibility of the Contractor. Develop and submit to the CO a project-specific Dewatering Plan with the Excavation Plan for approval. At a minimum, the Dewatering Plan must include drawings and a written outline illustrating and describing proposed layout, methods, equipment and anticipated stream flow volume. Approval of the Contractor's Dewatering Plan does not relieve the Contractor from completing the work as required. If the Contractor's methods are not producing adequate results, the Contractor must stop work immediately, re-evaluate, and submit a revised Dewatering Plan. Do not proceed with work until the revised Dewatering Plan is approved by the CO. Re-submittal of the Dewatering Plan, if required, is incidental to the work.
- 3. This sheet illustrates the general dewatering requirements and possible methods and equipment and is not considered adequate or complete for this project.
- 4. Contractor is responsible for sizing all pumps, dams, bypass pipe, open channels, and any other means proposed to divert the stream flow.
- 5. All work in the vicinity of the stream is to be completed in accordance with the contract specifications. Standing or running water in the work area does not relieve the Contractor from meeting the specifications.
- 6. Wash the newly construction channel prior to re-watering. This includes hosing the new channel and pumping the turbid wash water onto either vegetated ground or a settling basin in accordance with the approved Dewatering Plan. Return the stream flow to the newly constructed channel slowly and in a manner to minimize sedimentation.



PLAN



REGION ONE

BY	DATE	REVISION DESCRIPTION

DESIGN	CT	PROJ. NO.	0812
DRAWN	ASG	DATE	Apr-18
CHECKED	MJ	SURVEYED	DJ&A

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CONSULTING ENGINEERS & LAND SURVEYORS
3203 Russell Street, Missoula, Montana 59801-8591
Phone 406/721-4320 Fax 406/549-6371

**NEZ PERCE-CLEARWATER NFs
GRAVES MEADOW
NFSR 447 MP 8.33**

STREAM DEWATERING REQUIREMENTS

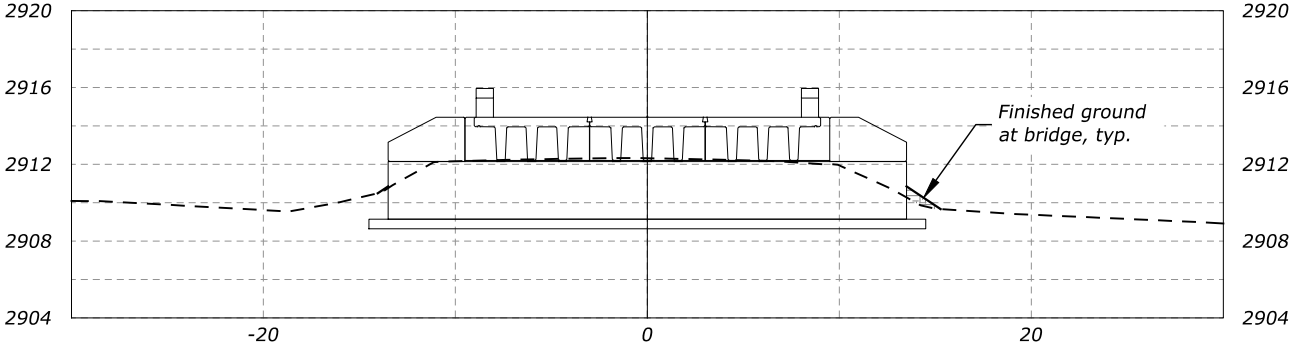
SHEET	OF
15	15

NEZ PERCE-CLEARWATER NFs
GRAVES MEADOW
ROAD CROSS SECTIONS

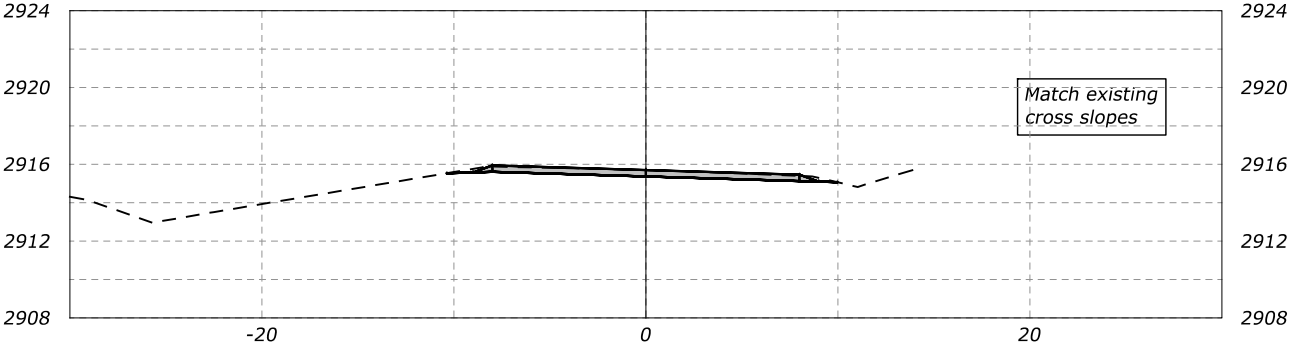
PREPARED BY : *D&A, P.C.*
CONSULTING ENGINEERS & LAND SURVEYORS
2203 Russell Street, Missoula, Montana 59801-5591
Phone 406/721-4320 Fax 406/549-4371

SHEET XS1 OF XS1

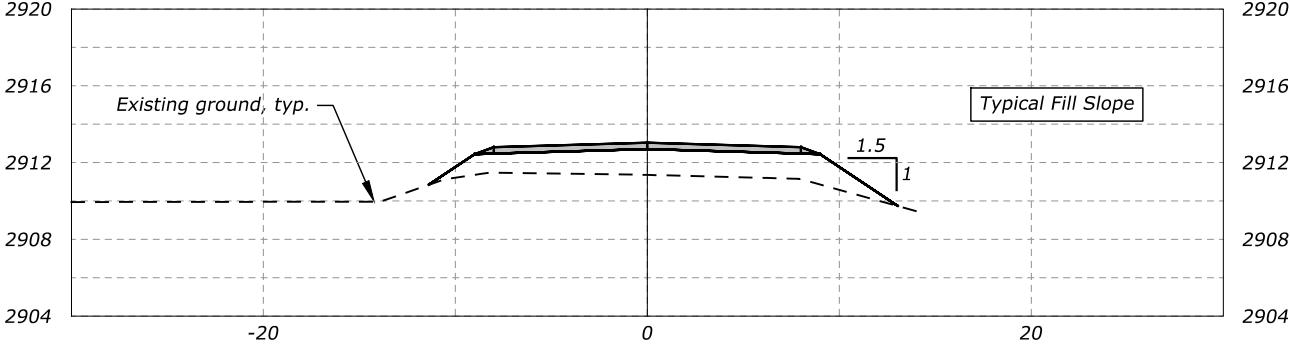
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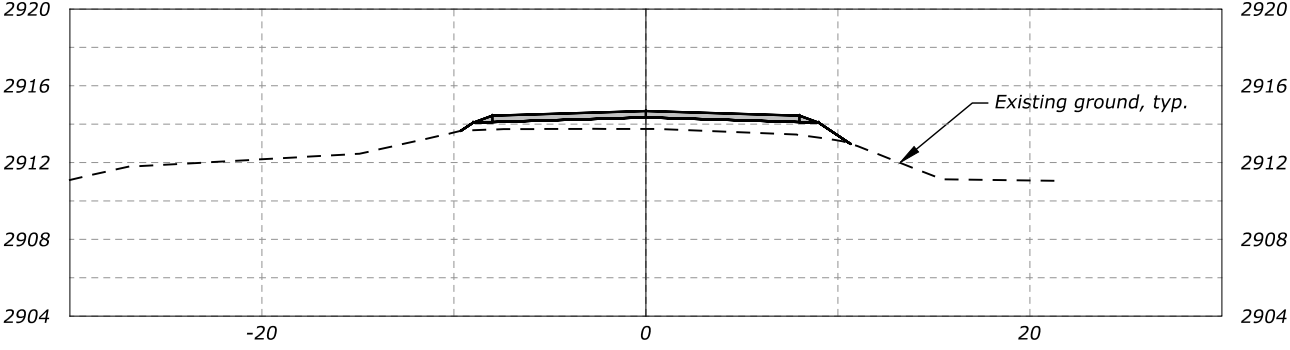
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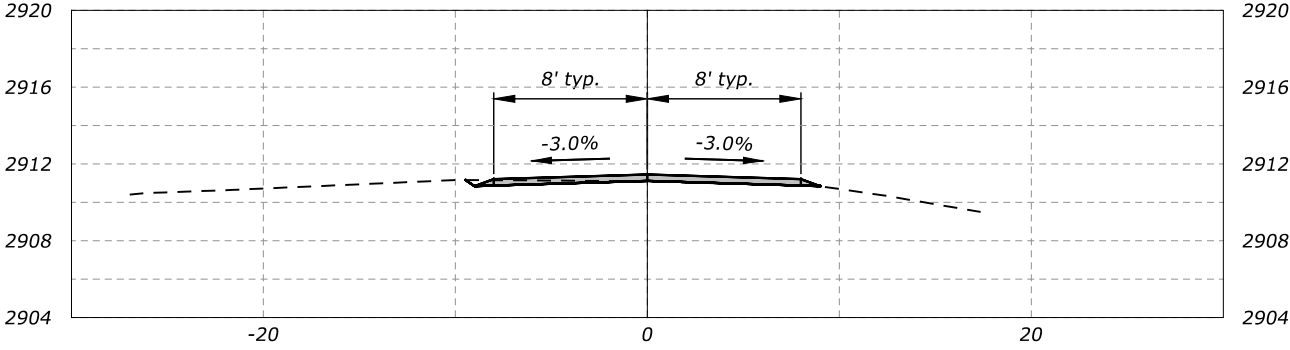
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3+60.00



2+00.00



3+28.61

